DLS Customer Guide

Version 1 • Revision 8 • September 2004

TABLE OF CONTENTS

— U n c o n t r o l l e d C o p y —

— U n c o n t r o l l e d C o p y —

DISCLAIMER

The DLS Customer Guide is provided in both controlled (DLS staff use) and uncontrolled (customer use) copy formats. Due to the wide geographic distribution and turnover in customers (e.g., deployment) DLS does not maintain a list of recipients and automatically provide updated copies. The contents of the DLS Customer Guide are subject to change based on method revisions, updates or changes. DLS is not responsible for sampling errors resulting from the use of outdated copies of this guide. Please routinely visit the USACHPPMEUR website to ensure you are using the current revision of the DLS Customer Guide. You can download your copy at the USACHPPMEUR Website:

www.chppmeur.healthcare.hqusareur.army.mil

— USACHPPMEUR —
DEPARTMENT OF LABORATORY SCIENCES

MISSION STATEMENT

"To provide sound science for risk-based decision making based on honest, ethical data reporting."

The Department of Laboratory Sciences maintains an ISO / IEC 17025 nationally and internationally accredited laboratory, operating under an ISO 9001 Registered Quality Management System and an ISO 14001 Registered Environmental Management System. These Accreditations and Registrations comprise DLS' Quality Systems (QS) and are the backbone that enable us to provide quality environmental laboratory services supporting the Health Promotion and Preventive Medicine Programs of our National Military Strategy in the U.S. European Command (EUCOM) and U.S. Central Command (CENTCOM) areas of responsibility.

DLS QUALITY POLICY STATEMENT

The management of the Department of Laboratory Sciences (DLS) is fully committed to maintaining an open and honest working environment by promoting trust in its employees, the DLS Quality System, and management's goals. DLS is dedicated to continually improving the effectiveness of the Quality Management System (QMS) by maintaining compliance with the requirements of ISO/IEC 17025, ISO 9001, and ISO 14001, as well as those of applicable accrediting/regulatory bodies. DLS' Quality Policy is the foundation upon which DLS' future success will be achieved and is an accurate representation of top management's vision, strategy and commitment to quality.

We want to create an environment and provide resources that encourage the highest ethical and professional practices suited to the following objectives —

Produce quality analytical data by,

- maintaining qualified, competent well-trained staff through external and internal training opportunities,
- monitoring laboratory performance through data review and validation, equipment maintenance and verification, and the Quality Control (QC) and Proficiency Test (PT) programs, and
- the continuous review of the QMS to identify areas for improvement with Quality System Review (QSR) and Management Review Team (MRT) meetings, internal and external audits, and corrective and preventive actions.

Provide excellent service to our customers by,

- partnering with our contractors and vendors to provide the best supplies and laboratory information available,
- carefully planning our work and services to meet specified requirements, Data Quality Objectives (DQOs), and/or Memorandum of Understanding (MOU) for projects, products, or contracts,
- seeking feedback from our customers on how we can improve our service to them through customer surveys, meetings, or telephone consults, and providing feedback and follow-up to them,
- assisting each other to go above and beyond in all aspects of our work in order to delight the customer, and
- looking for innovative solutions and promoting technological advancements.

All DLS personnel are required to be thoroughly familiar with the necessary QMS documentation and fully implement the quality policies and procedures in every aspect of their work. This policy shall be reviewed by the MRT on an annual basis, or as required for continuing suitability.

The Quality Policy statement is issued under the authority of the DLS Laboratory and Technical Director (chief executive).

DLS ENVIRONMENTAL POLICY

The Department of Laboratory Sciences (DLS) is fully committed to being an environmentally responsible neighbor both in the immediate community and global neighborhood in which we work. We strive for continual improvement of our Quality Systems (QS) through the use of environmental objectives and targets to provide the best possible level of service to our customers while conserving and ensuring the availability of resources for future generations. Top management wholly supports the following tenets and provides them as guidance to all of DLS' employees:

Prevention of Pollution

DLS will utilize safe technologies and operating procedures specifically designed to minimize risks for its employees and neighboring communities. DLS will make every effort to prevent our work from negatively impacting on the environment by optimizing our consumption of materials and reducing our generation of waste, while complying with established regulations for the safe treatment and disposal of generated waste.

Compliance

DLS will employ specific procedures to meet, and exceed when possible, compliance with all applicable legal requirements and U. S. military regulations. Where legal requirements and regulations are not adequate to guarantee our prevention goals, DLS will establish and meet our own standards.

Communication

DLS will pro-actively communicate these tenets and mandates to our employees, customers, stakeholders, and business partners to ensure full role and responsibility awareness. DLS will actively solicit input from these parties and in turn offer assistance to help them meet their goals.

SECTION 1
INTRODUCTION

1-1 PURPOSE

To guide you through the four main steps of submitting samples to the Department of Laboratory Sciences, United States Army Center for Health Promotion and Preventive Medicine-Europe (DLS, USACHPPMEUR):

- **Submitting a Request for Services**
- **Collecting and handling samples correctly**
- **Completing the required paperwork**
- **Shipping samples to DLS**

1-2 SERVICES

a. The Department of Laboratory Sciences' primary mission is to support Army environmental and occupational health programs internal to USACHPPMEUR. However, other Department of Defense and Federal agencies are supported on a reimbursable basis.

b. DLS consists of four divisions: Inorganic Chemistry & Toxicology Division (ICTD), Organic Chemistry & Toxicology Division (OCTD), Quality Assurance Division (QAD), and Customer Support Division (CSD). Arrangements for sample analysis are made through the Customer Support Division.

c. A list of the analyses available at DLS is included in Appendix A. We may be able to accommodate other requests through qualified contract laboratories or, if projected sample load is significant, through in house method development. New procedures are validated and approved by the Quality Assurance Division. New procedures incorporating calibration, Quality Control, and a full MDL study will be validated and approved by the Chiefs, QAD & DLS.

d. We provide quality data that is supported by several accreditations, registrations, and certifications (see Appendix D). Our data is recognized nationally and internationally by DIN EN ISO/IEC 17025:2000.

e. Matrices routinely analyzed by DLS and our US and German Contract Laboratories:

- Drinking Water (DW)
- Groundwater (GW)
- Wastewater (WW)
- Bulk Liquid (BL)
- Qualitative Contaminant ID in samples of unknown origin
- Filters
- Air Sampling Tubes
- Organic Vapor Monitors (OVM)
- Soil and Sludge (SL)
- Bulk Solid (BS)
- Dust Wipes
- Paint Chips

f. Sample Priority: DLS provides in-house, German Contract Laboratory (GCL) and USA Contract Laboratory (UCL) analytical services and three levels of sample priority:

Routine (R) – standard laboratory priority [Routine Priority lowest cost]

Immediate (I) – elevated laboratory priority based upon potential health risk or high cost for delay. A brief written justification is required. [Immediate Priority is 150% of the routine cost]

Emergent (E) – highest laboratory priority based upon the potential acute health risk or excessive cost for delay. A written justification is required. *[Emergent Priority is 200% of the routine cost]*

g. Turnaround Time Goals (TAT): The TATs listed for each priority are a ***goal***, not a guarantee. Sample workload and laboratory manpower can impact on the ability of the laboratory to meet the TAT goal. TAT is expressed in ***calendar days***.

Laboratory Turnaround Time (TAT) is defined as the time from receipt of samples in the laboratory to the dispatch of analytical data by commercial carrier, certified mail or transmittal of the Electronic Data Deliverable (Emergent and Immediate Priority samples).

Please use the following criteria as a guide to determine the overall project priority required:

Routine (R):

DLS: 14 day turnaround time (***goal***)
GCL: 14 day turnaround time (***goal***)
UCL: 30 day turnaround time (***goal***)

Immediate (I):

DLS: 7 day turnaround time (***goal***)
GCL: 7 day turnaround time (***goal***)
UCL: 14 day turnaround time (***goal***)

Emergent (E):

DLS: 72—96 hour turnaround time (***goal***)
GCL: 3—6 day turnaround time (***goal***)
UCL: 7 day turnaround time (***goal***)

Emergent turnaround time is method dependent. It is important to note that some analyses are time intensive and cannot be performed in a 72 to 96 hour TAT. In such cases, your data will be forwarded to you as it is available.

Qualitative Contaminant ID in samples of unknown origin is not associated with the three DLS Priority turnaround time goals. Samples will be handled in accordance with the Priority requested but sometimes even Emergent Priority samples may require 30 to 90 days or more to complete depending upon the complexity and number of analytical procedures required for complete contaminant ID.

If there is cause for your results to be delayed, you should be contacted by a DLS Division Chief or by CSD personnel with an explanation.

The following table contains the average TAT ± SD (calendar days) with the minimum and maximum achieved TAT for all samples submitted to DLS and its contract laboratories during the first 10 months of FY04. The TAT is calculated in calendar days from receipt of the samples at USACHPPMEUR DLS until the analytical data are reported to the customer by USACHPPMEUR DLS. Customers should use this as a guide in selecting the required priority for their projects after consulting Appendix A to determine which laboratory will be performing the desired analysis.

FY04 (Oct—Aug) Laboratory Turnaround Time Statistics

Priority	Laboratory	Average TAT	SD	Minimum TAT	Maximum TAT
Emergent	DLS	2.5	1.7	0	9
	GCL	5.8	2.8	1	15
	UCL	32.0	7.0	10	37
Immediate	DLS	5.2	2.4	0	14
	GCL	5.4	2.6	1	34
	UCL	23.1	7.5	9	45
Routine	DLS	9.0	4.5	0	43
	GCL	17.8	5.2	2	41
	UCL	41.1	21.8	9	172

DLS: USACHPMEUR Department of Laboratory Sciences
GCL: German Contract Laboratory
UCL: US Contract Laboratory

h. If necessary, samples can be handled as if they are of an evidentiary nature. The possession of these samples must be traceable from the time the samples are collected until the analysis is completed and the samples are released for disposal (see Chain of Custody Form [CSD Form 7], Section 3–4 g.).

i. Sample collection kits for water, soil, and limited industrial hygiene analytes that contain bottles, preservatives, ice packs, media, and coolers are available directly from CSD. The cost for these kits varies and will be billed to your project. Please contact CSD (see Section 2–1) or the DoD Accounts Manager (see section 2–2) for exact costs for your specific needs. The request for sample collection kits should be made on the CSD Form 1 (Request for Laboratory Services). If you cannot use the sample collection kit at the expected time, the preservatives are stable for one year from preparation date.

SECTION 2
HOW TO CONTACT DLS

2-1 CUSTOMER SUPPORT DIVISION (CSD)

Most communications with DLS occur through CSD. If our CSD professionals cannot answer your questions, you will be forwarded to the appropriate analyst or division chief. Everyone in DLS can view questions sent to:

usachppmeur.dlshotline@amedd.army.mil

Please use the DLS-Hotline email address listed above for communication with DLS. DLS-Hotline email messages can be viewed by all DLS thereby allowing the most qualified DLS professional to provide a timely and direct answer to your problem or inquiry.

Customer Support Division (CSD)	
Telephone	**DSN: 314-486-7052 or 314-486-8381 (alternate)** **Civilian: 06371-86-7052 / 8381 (In Germany, GE)** **Civilian Outside GE: (+49) 6371-86-7052 / 8381** **Civilian from the US: 011-49-6371-86-7052 / 8381**
Facsimile (FAX)	**DSN: 314-486-7054 or 314-486-8788 (alternate)** **Civilian: 06371-86-7054 / 8788 (In Germany, GE)** **Civilian Outside GE: (+49) 6371-86-7054 / 8788** **Civilian from the US: 011-49-6371-86-7054 / 8788**
usachppmeur.dlshotline@amedd.army.mil	

Customer Support Division Shipping Addresses	
MILITARY POSTAL ADDRESS	GERMAN POSTAL ADDRESS
United States Army Center for Health Promotion and Preventive Medicine - Europe Department of Laboratory Sciences ATTN: MCHB-AE-LS (CSD) CMR 402 APO AE 09180	United States Army Center for Health Promotion and Preventive Medicine - Europe Department of Laboratory Sciences ATTN: MCHB-AE-LS (CSD) Kirchberg Kaserne Gebäude 3809, Raum 110 D-66849 Landstuhl, Germany

Appropriate questions for CSD

usachppmeur.dlshotline@amedd.army.mil

- Have my results for project number XYZ been sent out yet?
- Can X and Y be analyzed out of the same sample container?
- How can I arrange a sample delivery through UPS, FedEx, or DHL?
- How do I make changes to a Request for Laboratory Services?

2-2 FINANCE

All reimbursable work requires funding to be in place ***prior*** to submission of samples. Submit a Military Interdepartmental Purchase Request (MIPR, DD Form 448) to one of the addresses below and follow-up with a faxed copy. Other government affiliates should contact the DoD Accounts Manager.

DoD Accounts Manager	
Telephone	**DSN: 314-486-7744 or 314-486-8381 (alternate)** **Civilian: 06371-86-7744 / 8381 (In Germany, GE)** **Civilian Outside GE: (+49) 6371-86-7744 / 8381** **Civilian from the US: 011-49-6371-86-7744 / 8381**
Facsimile (FAX)	**DSN: 314-486-7075 or 314-486-8788 (alternate)** **Civilian: 06371-86-7054 / 8788 (In Germany, GE)** **Civilian Outside GE: (+49) 6371-86-7054 / 8788** **Civilian from the US: 011-49-6371-86-7054 / 8788**
usachppmeur.dlshotline@amedd.army.mil	

DoD Accounts Manager Correspondence Addresses	
MILITARY POSTAL ADDRESS	**GERMAN POSTAL ADDRESS**
United States Army Center for Health Promotion and Preventive Medicine - Europe Department of Laboratory Sciences ATTN: MCHB-AE-L (DoD Accounts) CMR 402 APO AE 09180	United States Army Center for Health Promotion and Preventive Medicine - Europe Department of Laboratory Sciences ATTN: MCHB-AE-L (DoD Accounts) Kirchberg Kaserne Gebäude 3809, Raum 130 D-66849 Landstuhl, Germany

A price list is available upon request. Prices for Immediate and Emergent Priority turnaround times are 150% and 200% of the routine price, respectively. Please call about price quotes for specific projects or analyses, and to inquire about volume discounts.

Customers are provided periodic statements that include the cost of all samples submitted plus shipping charges.

Appropriate questions for Finance:

- How much does it cost?
- How much money is left in my MIPR?

Please send all questions and inquiries to the DLS Hotline address at:

usachppmeur.dlshotline@amedd.army.mil

— U n c o n t r o l l e d C o p y —

SECTION 3
SAMPLE SUBMISSION

3-1 OVERVIEW

Prior to submitting samples to DLS, financing must be arranged through our DoD Accounts Manager (see Section 2–2). The next step is to submit your Request for Laboratory Services (RLS). Your request will be reviewed by CSD first and given a Service Request Number (SRN). The Chief or Deputy Chief of the analytical division performing analysis will review your request. You will be contacted if there are any questions or modifications that are needed. Once your RLS has been accepted, CSD will notify you on the acceptance of your request and provide you with your SRN. Once you are issued your SRN you may submit samples to DLS on the agreed upon date. If there will be a delay in sample delivery and you can not submit your samples on the agreed date, ***please*** contact CSD to update the RLS.

The proper forms must be submitted with the samples to ensure accurate and efficient processing into the DLS system.

3-2 REQUEST FOR LABORATORY SERVICES [RLS, CSD FORM 1]

a. Once completed and accepted the RLS serves as the formal ***contract*** for analytical services between DLS and the customer. The customer generated RLS communicates the specific customer requirements and expectations to laboratory. DLS either accepts or modifies the RLS to document our ability to satisfy the stipulated requirements and returns an Adobe™ Acrobat® pdf copy of the RLS to the customer by email (when possible). After the contract (RLS) is approved and accepted by both DLS and the customer, any subsequent changes to the accepted RLS ***must*** be coordinated and agreed to by ***both*** parties.

b. At least two weeks prior to the sampling event (three weeks if you are requesting a sampling kit) a RLS form with all information fields filled out completely (see Figure 3-1) ***must*** be sent to DLS. The RLS may be hand delivered, mailed, faxed, or sent electronically to the central email account:

usachppmeur.dlshotline@amedd.army.mil

Figure 3-1 — Example Request for Laboratory Services Form

CSD Form 1
Version 3.6
Revised: Sept. 2004

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

CSD will assign a Service Request Number (SRN) to your project once it is accepted.

Request for Laboratory Services

Customer Address: USACHPPMEUR, CMR 402, APO AE 09180			**DLS SRN:** 05-001
Project Officer: C, CSD (OEF SIPRNET Message)		**Request Date (DDMMMYYYY):** 01 Sept 2004	
TEL: 314-486-7052 / 8381	**FAX:** 314-486-7054 / 8788	**Email:** usachppmeur.dlshotline@amedd.army.mil	
Division: CSD	**Program:** 47	**Installation Site:** Not Disclosed	**ARLOC / WIC:** N/A
Source of Funds: GWOT		**MIPR No.:** OIF	
Project Number: 2005-SP-001		**Sampling Date:** 05 Sept 2004	**Delivery Date:** 07 Sept 2004
DLS Sampling Kit Required: ❑ No ☑ Yes		**Date Kit Required:** OEGBD Kit - ASAP	**Kit Shipped By:** FedEx or DHL
Analysis Priority Requested ❑ Routine ❑ Immediate ☑ Emergent			**Justification (see Note 2):** Field tests indicated the presumptive positive presence of cyanide, heavy metals, and a strong organic odor in a water sample. The Post has been placed on bottled water. Possible distribution system contamination/adulteration. Request a complete OEBGD analysis. The results are needed ASAP!

Note 1: Sample Priorities are associated with Turnaround Time (TAT) ***goals*** and not guarantees. TAT is defined as the number of calendar days from sample receipt at the laboratory to the transmittal of data by Electronic Data Deliverable (EDD) courier, FAX, or certified mail. The TAT ***goals*** are: Routine: 14 days, Immediate: 7 days, and Emergent: 48-96 Hrs. (test dependent). Qualitative Identification of contaminants from samples of unknown origin may require 30 to 90 days or more to complete.

Note 2: Immediate / Emergent analysis priority ***requires*** a written statement documenting the ***risk*** that justifies the elevated priority.

Note 3: This Request for Laboratory Service will be cancelled 60 calendar days after the Projected Delivery Date unless the Project Officer provides a written confirmation of an updated Delivery Date.

Note 4: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

Note 5: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements.

❑ *NO – I do **NOT** authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*

Projected Samples

Analysis	Matrix	Quantity	Remarks	DLS Use CL
Metals: Al, Sb, Br, Ca, Cd, Cr, Fe, Cu, Ag, Zn, Se	DW	2		
Non-Metals: Cyanide, Ammonia, TDS, pH, Alkalinity,	DW	2		
Color, Order, Nitrate, Nitrite, Kjeldahl Nitrogen	DW	2		
Other: Asbestos, Gross Alpha/Beta	DW	2		
Organics: VOC, PAH, PCB, Pesticides, Herbicides	DW	2		
Carbamates, Adipate/Phthalate, Dalapon, Surfactants	DW	2		

❑ ***Request lead (Pb) samples be analyzed IAW ELLAP criteria** – Note: Pb "Wipes" must meet ASTM E 1792 specifications.*

Comments / Qualifications: Deployed Team has an OEBGD kit with them. Please ship a replacement kit ASAP. Samples will be hand delivered to CSD and are in route.

— For Laboratory Use Only —

Inorganic Analyses				Organic Analyses			
❑ Accept	❑ Reject	Date:	Initials:	❑ Accept	❑ Reject	Date:	Initials:
Comments:				Comments:			

Please contact us. DLS professionals would be delighted to help answer any of your questions and concerns!

	DSN	Commercial	Use our preferred email address to ensure a quick response.
TEL	314-486-8181 / 7052	+49 (06371) 86-8371 / 6052	Email: usachppmeur.dlshotline@amedd.army.mil
FAX	314-486-7054 / 8788	+49 (06371) 86-7054 / 8788	Web Site: www.chppmeur.healthcare.hqusareur.army.mil

c. The request will be evaluated against analysis availability and sample load at the predicted date of sample submission. An acceptance, request for delayed sampling, or lack of availability of the required analyses will be noted on the form, and the customer will be notified by telephone, fax or e-mail. If high sample load prevents analysis at the requested time, an alternate submission date will be suggested by DLS. If samples are not received within 60 days of the delivery date listed on the RLS, the original request will be considered invalid and a new RLS must be submitted.

d. CSD will assign a ***Service Request Number*** (SRN) to your RLS. Please use the SRN provided in the DLS email notification of RLS acceptance for your project by CSD to request changes to your project or to inquire about the status of your samples following submission. Please note that if you do request changes to your RLS the review process described earlier must be completed again to ensure DLS can meet your needs.

e. Sample delivery ***must*** be coordinated so that samples are received in CSD prior to 1400 hours Monday through Friday. DLS can not guarantee that samples received after 1400 hours will be processed in to the LIMS (Laboratory Information Management System) and released to the analytical division prior to the close of business on the day of sample receipt. ***After hours, weekend or holiday delivery is only available when the customer has coordinated with CSD well in advance of the requested non-duty hour delivery date.***

3-3 SAMPLE HANDLING / COLLECTION

a. **Sample Collection**

- Sampling containers supplied by DLS contain the required preservatives. ***Do not rinse*** the containers prior to filling, and do not allow overflowing.
- Gently invert the containers several times after filling to ensure adequate mixing of the preservative with the sample.
- Keep cool (1°C to 6°C) when required by method (see Appendix A).
- If providing your own containers and preservatives, a guide for sample collection is located in Appendix A. Please ensure you annotate all added preservatives on the container.

b. **Deployment 40 mL Drinking Water Kit (Screen)**

- The Deployment 40 mL Drinking Water Kit was developed to screen drinking water for a limited list of contaminants. The Deployment 40 mL Drinking Water Kit ***can not*** be used for drinking water compliance testing. Due to the reduced volume (40 mL) of the Kit, full quality control procedures are not possible for all methods (i.e., dealing with matrix interference or problems that would require repeat analysis). ***The Deployment 40 mL Drinking Water Kit is not suitable for raw water, surface water, or any bulk liquid sampling and testing.***

c. **Special Considerations**

- Ensure you clearly mark all samples and annotate the paperwork when known contaminants such as Hydrogen Sulfide are present in the samples or if you suspect or have noticed an unusual odor or physical characteristic of the samples. These observations are important in protecting the health of all individuals who handle the samples.
- Samples collected from areas suspected to have been previously contaminated with Chemical Warfare (CW) / Biological Warfare (BW) agents or exposed to Toxic Industrial Chemicals (TIC) / Toxic Industrial Materials (TIM) ***must*** be **SCREENED** and found to be **NEGATIVE** prior to shipment to DLS. The screen findings ***must*** be marked as such on the sample container and on the accompanying paperwork. ***Do not send samples known to be contaminated with CW/BW agents.***
- It is important for **EACH** VOC sampling location that ***three*** vials are collected and filled ***without*** any air bubbles and ***free*** of headspace. VOC (also BTEX, CHC, and TTHM) samples are to be collected *in triplicate* into 40 mL amber glass vials containing 25 mg ascorbic acid. Four drops of 2X hydrochloric acid (HCl, 2X = 1 part concentrated HCl added to 1 part H_20 = 6N HCl) ***must*** be added to ensure a pH of < 2.
- Samples submitted for the determination of TTHM-Potential shall be collected in triplicate and ***must not*** contain ascorbic acid or HCl.
- Trip blanks (also known as Field Reagent Blanks) are usually provided by CSD and must be included. Equipment blanks (also known as rinseate blanks) if collected must be included in triplicate. **Note**: Trip blanks ***must never*** be opened and ***must always*** be kept with the samples. Trip blanks are used to determine whether method analytes or other interferences are

present during transportation or handling. Equipment blanks are used to monitor whether sampling equipment may be a source of contamination.

- Avoid transporting samples (water, soil, or air sampling media) for the analysis of volatile organic compounds in an enclosed vehicle trunk. Fuel fumes and exhaust gases are likely sources of contamination.
- IH samples for organic analysis require submission of at least 2 additional pieces of blank media per 10 samples. IH samples for metal analysis require submission of a least 3 additional pieces of blank media per 10 samples. The additional pieces of blank (unused) media are used for the preparation and analysis of quality control samples to ensure the integrity of the data and to determine the Desorption Efficiency for the requested analytes. The submitted pieces of Blank Media must originate from the same lot number used for the sample collection.
- A minimum of two fiber (asbestos) field blanks must be included with every set of 10 or fewer fiber (asbestos) filter samples submitted for analysis. Filters used for collection must be from the same lot number as blank filters. The average blank filter fiber count is required for the calculation of fiber sample results. A lot blank may be submitted prior to use of a new media lot to validate the integrity of the lot prior to use. If this is requested, it must be clearly noted on the RLS as a lot blank and ***not*** a field blank.
- When submitting IH samples for analysis of fingerprint compounds please include a bulk sample (5 mL) of the suspected source substance.
- If samples are being collected for analysis in accordance with the requirements for Environmental Lead Testing Program (see page A-17, Appendix A, Section X – Inorganic Analytes: IH), please check the appropriate box…

  ❑ *Request lead (Pb) samples be analyzed IAW ELLAP criteria – Note: Pb "Wipes" must meet ASTM E 1792 specifications.*

  …on the RLS form (CSD Form 1) and on any additional paperwork submitted (CSD Form 2, CSD Form 3, etc.) with the samples.

d. **Sample Labeling**

- Samples must be labeled using indelible ink.
- Sample labels should clearly define a unique sample identification known to the project officer. Include the sample ID, sample location, date (see 3-3 e. for preferred date protocol) and time collected

(important for short hold time samples), and collector's initials. When available, GPS data should be included.
- Accurately reference each sample on the forms submitted to DLS.

e. **Sample Date Protocol**

- DLS requests customers to use the following protocol for recording the date of sample collection:

  Day / Month (3 Letter Abbreviation) / Year (4 digits)

  — REQUESTED DATE FORMAT EXAMPLE —

  09 Oct 2003

- DLS receives samples from our valued customers located in many areas of the world and from different cultural backgrounds who may use different forms of recording the date. Using the DLS recommended date protocol will prevent confusion for the laboratory and delays in processing and analysis. When samples are received with a sample date recorded, for example, as 09.10.03, it can cause significant delays in the initial processing of the samples. CSD staff must first determine if the samples were submitted by a US customer (10 Sep 03) or an EU customer (09 Oct 03) to ensure proper sample handling and computer entry. Please use the Day / Month (3 Letter Abbreviation) / Year (4 digit) date protocol. ***Thanks for your cooperation!***

f. **Sample Packaging**

- Check that all sample bottle lids are on tight and not leaking.
- Line the appropriate size cooler *generously* with packing material.
- Wrap glass containers individually with sufficient packing material to prevent container breakage.
- Include frozen ice packs for samples that require cooling. For a large cooler use approximately 20 pounds of cooler packs.
- Do not use ice unless cooler packs are unavailable. If you do use ice, double bag it so the bottle labels do not get wet.
- Place forms ***inside a sealed plastic bag*** within the cooler.

g. **Sample Retention and Disposal**

- Samples and sample extracts will remain in refrigeration or other appropriate storage for at least thirty days following issue of the

DLS official Certificate of Analysis ***unless the customer requested a longer holding.*** Samples and sample extracts will be disposed of in accordance with laboratory Standard Operating Procedure (SOP).

3-4 INSTRUCTIONS FOR SAMPLE SUBMISSION FORMS

The proper CSD form must be submitted with the samples. Be sure to fill out the forms completely to prevent any delays in processing your samples. The following is a guideline for selecting the correct form to match the sample type. All forms are provided in Appendix E and can be reproduced.

a. **CSD Form 1 – Request for Laboratory Services**

- See Section 3-2

b. **CSD Form 2 – Request for Laboratory Analysis: Industrial Hygiene Bulk Sample**

- Use this form for bulk solid or bulk liquid samples (including Qualitative Contaminant ID).
- This form may be used for several samples but only one type of analysis should be included per form.
- Attach available information on the suspected contaminant [*e.g.,* manufacturers' information or Material Safety Data Sheet (MSDS)].

c. **CSD Form 3 – Request for Laboratory Analysis: Industrial Hygiene Air Sample**

- Use this form for filters, passive monitors, and air sampling tubes.
- This form may be used for several samples but only one type of analysis should be included per form.
- Flow rate, collection time, and volume must be included.
- Two blanks per ten samples must be included. For optimal data quality, include two additional filter blanks of the same lot number per submission to prepare quality assurance samples.

d. **CSD Form 4 – Request for Laboratory Analysis: Bulk Liquid / Groundwater / Wastewater Profile Sheet**

- Use this form for bulk liquids, groundwater, and wastewater but *not* drinking water.
- Use only one form per sampling site.

- Fill out the information boxes at the top of the page.
- Place an X in the box next to each analysis requested.

e. **CSD Form 5 – Request for Laboratory Analysis: Drinking Water Profile Sheet**

- Use this form for drinking water only.
- Use only one form per sampling site.
- Fill out the information boxes at the top of the page.
- Place an X in the box next to each analysis requested.
- On-site temperature and pH ***must*** be provided by the customer when requesting Langlier Index.

f. **CSD Form 6 – Request for Laboratory Analysis: Customer Defined**

- This form can be used for a broad range of matrices and analyses. It is best used when submitting a mix of samples or numerous samples for few analyses (e.g., 20 samples for Pb and Cu, 20 VOCs).
- Specify any special requests in the 'remarks' section of the form.

g. **CSD Form 7 – Chain of Custody**

- This form documents the possession of a sample. A properly completed CSD Form 1 – Request for Laboratory Services must be submitted in addition to CSD Form 7.
- Custody begins with the individual performing the sampling and in some instances, with the source of the sampling containers. The form ***must*** be signed by the collecting official and all subsequent individuals who take custody of the samples.
- For samples that require refrigerated shipping, coolers can be sent via commercial carrier without formal chain of custody procedures on the cooler when the following precautions are taken: 1) Samples are properly sealed with "evidence tape," 2) properly sealed samples are placed in an internal container that is sealed with "evidence tape" or another suitable solution, and 3) CSD Form 7 is attached to the outside of this container by the individual who packaged the samples in the container. These procedures allow the recipient who unpacks the samples and accepts the custody to re-establish custody and document that the samples were not tampered with by inspection of both the outside container and the samples.
- Samples that do not require refrigeration and are not time sensitive should be sent by the ***United States Postal Service using***

Registered Mail with a Return Receipt Request to ensure a proper chain of custody.

- Errors in form completion must be corrected by drawing a single line through the error followed by the individual who made the correction initialing and dating the entry.
- CSD Form 7 is normally required only when the data generated from analysis of the samples is required for adjudication.
- Please contact CSD if you require legally defensible "chain of custody" for detailed discussions on sample labeling, packing, and shipping procedures.

h. **CSD Form 8 – Request for Laboratory Analysis: Bioassay**

- Radionuclide analysis of urine and stool are available through a contract lab. DLS acts ***only*** as a shipping agent for bioassay samples. The Contract laboratory will return bioassay data directly to the customer and not DLS.
- This analysis typically takes 90 – 180 days.
- Contact CSD for instructions on shipping bioassay samples.

i. CSD Form 9 – Deployment 40 mL Drinking Water Kit (Screen)

- The use of the Deployment 40 mL Drinking Water kit is ***limited*** to the analysis of ***finished*** drinking water.
- Use this form for the 40 mL Deployment Drinking Water Kit reduced volume analytical screening procedures.
- Please use one form per 40 mL kit and sample site.
- Fill out the information boxes at the top of the form.
- Place an X in the box next to each analysis / analyte requested.

3-5 SAMPLE SHIPMENT

a. Figure 3-2 outlines shipping procedures. Contact CSD to determine the best means of sample shipment. See Section 3-2 e. for additional information concerning sample delivery date.

FIGURE 3-2 — SHIPMENTS CONTAINING SAMPLES	
• With long holding times • Not requiring refrigeration	• For immediate or emergent analysis • With short holding times • That must be refrigerated
— Can be sent by —	***— Must be sent by —***
✓ Commercial Carrier ✓ Within Germany: United Parcel Service (UPS) ✓ Outside Germany: Federal Express (FedEx) & DHL Worldwide ✓ Hand Carry ✓ Air Mobility Command (AMC) ✓ Military Postal Service ✓ U.S. Postal System	✓ Overnight service via Commercial Carrier ✓ Within Germany: United Parcel Service (UPS) ✓ Outside Germany: Federal Express (FedEx) & DHL Worldwide ✓ Hand Carry ✓ Air Mobility Command (AMC) may be possible with proper special handling codes (**999**)
Check with the carrier to ensure delivery date!	

b. CSD can assist you in arranging sample shipment with a commercial carrier. Sample shipments billed to our commercial shipping account number will be invoiced to your account. Contact CSD staff for current contract information.

c. Air Mobility Command (AMC) flights may also be used to ship samples. A Transportation Control and Movement Document must accompany your shipment (DD Form 1384). Refer to Appendix C for instructions on filling out this form.

Once an AMC shipment has been arranged be sure to provide CSD with the Transportation Control Number (TCN), flight number, and departure time. This information insures that CSD can track your shipment and pick up your samples in time for analysis.

3-6 RESULTS

Data will not be released until reviewed and verified by the appropriate Technical Manager or Division Chief (Organic or Inorganic). Sample results (data) will only be released to the project officer or designated representative (authorized, in writing, by the project officer).

Results will be reported in preliminary form in an Electronic Data Deliverable (EDD) for Immediate and Emergent Priority samples as individual sets of analyses are completed and for all projects when all analyses are completed. The official DLS

Certificate of Analysis will be delivered via commercial carrier or certified Military Postal Service (MPS). ***Please sign and date the certified mail receipt.*** Customers internal to USACHPPMEUR can sign for results through a CSD representative.

— U n c o n t r o l l e d C o p y —

SECTION 4
FREQUENTLY ASKED QUESTIONS (FAQ) & COMMON PROBLEMS

4-1 FORMS:

Q: I am conducting my quarterly/annual sampling. Do I really need to submit another Request for Laboratory Services? Couldn't you look on the last one I submitted?

A: A new Request for Laboratory Services must be submitted for every project. This form is considered to be the contract and is used to predict and schedule workload.

Q: I've already submitted a Request for Laboratory Services, is it really necessary to submit a Request for Laboratory Analysis form with the samples?

A: Yes. The Request for Laboratory Analysis provides the laboratory with information about the samples and acts as a "Receipt" of the samples submitted. The information on this form will be entered into our LIMS database and will show up on the Certificate of Analysis. A Request for Laboratory Analysis must be submitted for each sampling event or site.

Q: I have some definite changes in my Request for Laboratory Services that the lab might find useful (matrix changes from drinking water to salt water). Do I really need to contact anyone about that?

A: Yes. Once the Request for Laboratory Services has been accepted by DLS, any changes/updates need to be coordinated through CSD. Acceptance is based on available staff, instrumentation and current workload; any changes to the request may require adjustments to sampling date(s), TAT, etc.

Q: Which form do I use?

A: There is no "clear-cut" answer to this question; several of our forms are applicable to different matrices. While our forms have been designed for ease of use, which form to use is not always obvious. We have a form for Industrial Hygiene (Air sampling), Bulk samples, and a Generic form for other samples. Additionally, we have designed a form for Drinking Water and Waste/Bulk/ Groundwater Profiles. If you cannot decide which form is best to use, consult section 3-4 or contact CSD for assistance.

4-2 PROJECT COORDINATION:

Q: Who can I talk to about analysis? Sample submission / kits, accounts, prices, and payment methods?

A: The Customer Support Division is the portal to the laboratory. CSD can provide answers to most of your questions. If you have a question regarding specific methods, results, billing, etc., we can put you in contact with the appropriate authority. If you are a customer using DLS services on a reimbursable basis the first step is to arrange for payment of the DLS services required with DLS' DoD Accounts Manager (see Section 2-2).

Q: What is the best way to contact the lab?

A: You can contact CSD by phone (DSN: 486-7052), fax (DSN: 486-7054), or email. If emailing your questions/concerns, please send your message to our hotline:

usachppmeur.dlshotline@amedd.army.mil

The hotline is available to all DLS staff members and is checked several times a day.

Q: I am new, so in layman's terms, how does this whole sample submission system work?

A: At least two (2) weeks prior to your sampling date, submit a Request for Laboratory Services. You should get a response from us within 48 hours as to whether or not your request has been accepted (based on projected and current workload). Collect the samples and complete a Request for Laboratory Analysis with the sampling information. Ship the samples and request(s) to DLS. Upon analysis, the results will be released and Certificates of Analysis printed. The Certificates will be forwarded to you via appropriate means (DHL, UPS, Certified Mail, etc.).

Q: What are the turnaround time options and how do I determine the proper priority to place on my samples?

A: DLS offers three levels of sample priorities based upon laboratory turnaround time goals: Routine Priority (14 day TAT), Immediate Priority (7 day TAT), and Emergent Priority (72 – 96 hour TAT). The TAT listed for each priority is a ***goal***, not a guarantee. Please use the following criteria to determine the priority:

Routine - standard laboratory priority.

Immediate - based upon potential health risk or high cost for delay. A brief written justification is required.

Emergent - based upon the potential acute health risk or excessive cost for delay. A brief written justification is required.

It is important to note that some analyses are time intensive and cannot be performed in a 72 to 96 hour TAT. In such cases, your data will be forwarded to you as it is available. Additionally, if there is cause for your results to be delayed, you should be contacted by a DLS Division Chief with an explanation. Please note that qualitative contaminant ID of samples of unknown origin or unknown identifications may require 30 to 90 days or more.

Q: I have a big project coming up. I am going to need kits, containers, preservatives, and schedule pickups from various points in the region. How far in advance should I plan to coordinate a project of this size?

A: If you have a big sampling project, it is best to coordinate with CSD as soon as possible (at least 3 to 4 weeks in advance). This gives the lab time to prepare your kits, coordinate shipping services, and plan for the workload. Additionally, it allows for time to make adjustments should any problems arise.

4-3 Sampling KITS:

Q: How do I order a kit?

A: If you require a sampling kit please submit your request at least three weeks prior to the anticipated sample collection date. The Request for Laboratory Services has a section where you can order a kit. Place an “X” in the “Kit Required” box and then fill in the date it is needed. CSD will prepare the kit and ship it to your location.

Q: Will I get everything I need in a kit? How easy are the kits to use?

A: Yes. Each kit will have the appropriate containers, preservatives, trip blanks, and packing/shipping materials for the analyses you have requested. In most cases, the only thing you will need to do is to fill the containers (they already contain the proper preservative). Some samples may require the addition of preservative(s) after filling. In these cases, the preservatives are in separately labeled vials with instructions for use included.

Q: What if I don't get everything in my kit or I notice something missing?

A: Contact CSD. In many cases, individual analytes are grouped together for collection in a single container. CSD personnel can help you determine if this is the case. If there is indeed something missing, CSD will get the supplies to you via the quickest route.

4-4 SAMPLING:

Q: How many Trip Blanks / Field Reagent Blanks are needed in a kit? Would there be a situation where I will need more?

A: Usually, there is one set of trip blanks per project. Unless there are special requirements (e.g., separate sites to be sampled on different dates) it is important to specify the need for extra trip blanks. CSD prepares the blanks based on the information provided on the Request for Laboratory Services and includes them in the DLS supplied Sampling Kit.

Q: Why do I have to send blanks with my samples?

A: The purpose of the Trip Blank / Field Reagent Blank is to determine the presence of any possible substances that might interfere with the method that are not present in the actual sample (i.e., a false positive). An unused media blank for each lot of media used in a sampling event ***must*** accompany the media used for sample collection throughout collection, transport and shipment of the samples. The blank serves as a check for contamination of the lot of media as it was received from the manufacturer or that may have occurred during shipping, transport, sampling or present in the lot of media used for the sample collection. Media blanks are required for both organic and metal IH samples and are used to determine the integrity of the sampling media and for quality control spikes included within the sample analytical run. Asbestos filter blanks are vital in ruling out contamination of filter cassettes. Blanks are a valuable and an important factor in distinguishing between true and / or falsely elevated results. It is the customer's responsibility to ensure that blanks for all customer supplied media and containers are submitted for analysis.

Q: Can I use baby wipes for metals wipe sampling?

A: Baby wipes and other similar commercially acquired materials are not appropriate for environmental sampling as they do not completely dissolve during the digestion process. Wipes submitted for metals analysis should be approved for environmental sampling. At least 3 additional wipes should be submitted along with samples in order for the laboratory to check for background contamination and use as quality control samples. *Note: "Wipes" submitted to ensure compliance with the Environmental Lead Laboratory Accreditation Program* ***must*** *meet ASTM E 1792 specifications.*

Q: How much sample is really needed?

A: It is important to follow the sampling guidelines listed in Appendix A. The minimum volume of sample is based on analytical method requirements.

Q: What if I don't collect all three vials for VOC, TTHM, etc.?

A: Due to the volatile nature of the organic compounds, once the container is opened and analyzed it cannot be re-used for repeat analysis. The extra two vials are intended for repeat analysis in the event of elevated results or if the analysis must be repeated due to unacceptable Quality Control (QC) results. Without these extra vials, an additional analysis would not be possible.

Q: Is a pre-weight really necessary for a total dust analysis? Don't all filters weigh the same?

A: The method specifically requires the media to be pre-weighed for this analysis. This value is an important part in the calculation of the results. Blanks (2 per 10 samples) are also very important for this method, since they are used to account for any difference between the balances used to do the pre-weight and post-weight.

Q: How many metals can be analyzed from one filter?

A: It depends on the method. Three to four metals can be reported quantitatively from an OSHA 121 or OSHA 125 filter. On NIOSH 7300, however, the combinations of metals are limited by the sampling volumes dictated by the method.

4-5 SHIPPING:

Q: How do I ship samples?

A: Depending on your geographical location, there may be several shipping options. CSD recommends you first contact FedEx, DHL or UPS and determine if one or all of those commercial carriers service your locations (**www.fedex.com**, **www.dhl.com**, **www.ups.com**) Contact CSD for more information and assistance.

Q: How do I pack samples? How do I know that I did a good job packing my kit to ensure the least amount of bottle breakage?

A: There is no way to guarantee that there will be no breakage; however, liberal use of bubble wrap or other suitable packing material will minimize the possibility. If there are special temperature requirements, be sure to leave enough space to add ice packs. Additionally, be sure to fill extra spaces with packing material. Perform a "shake test" to see if anything moves around or rattles. If so you ***need*** more packing material.

4-6 RESULTS:

Q: Is there a way for me to receive my results via email/phone?

A: Currently, DLS does not offer ***official*** analytical results via email/phone. They are only available on the *Certificate of Analysis*. Division Chiefs can email

preliminary results in an Electronic Data Deliverable (EDD, MS Excel file) or based upon urgency, provide telephonic release of limited data followed by email of an EDD. Telephonic release is ***not*** a routine procedure.

Q: I cannot find a Certificate of Analysis from the previous quarter. Can I get a reprint?

A: Yes. Provide the sample/project information to CSD and a reprinted Certificate of Analysis can be generated.

Q: Can DLS give my Certificates of Analysis to a colleague? Can DLS give me the results from someone else's (XYZ) project?

A: Under normal circumstances, DLS will not release results to anyone other than the project officer. The project officer must submit a written request to DLS to authorize the release of data from one of his/her project(s) to another individual.

4-7 OTHER:

Q: If I have a complaint, a positive note, or a suggestion that I think the lab could use to improve the service/performance, how should I submit this?

A: A customer survey is included with every packet of Certificates sent. Please take a moment to let us know how we are doing. Additionally, if you are not satisfied with our service/performance, feel free to submit your concerns to the hotline. We value your input - all comments are read by our Management Review Team and acted on accordingly.

Q: An individual has been exposed to a radiological contaminant. Can DLS analyze a urine specimen from the individual to determine the amount of exposure?

A: DLS does not perform radiological testing of bioassay samples; however, we have a contracted laboratory that performs analyses for Americium-241, Cesium-137, Depleted Uranium, Radium 226, and Tritium in Urine. Other radiological bioassays may also be available. Please contact the Customer Support Division for specific instructions on the collection, shipment, and requirements for radiological testing.

Q: I submitted a sample of unknown origin for qualitative ID of contaminants two weeks ago. Why haven't I received my results?

A: The qualitative ID of contaminants in samples of unknown composition and origin is not a quick or simple analysis. Depending on the matrix, there may be many different time intensive tests involved and it could take up to 90 days for final results. If you have a question as to the status of your results, please contact CSD.

4-8 COMMON SAMPLE SUBMISSION PROBLEMS & CONCERNS

This section is included in order to avoid problems that might delay or prohibit the analysis of your samples.

Bulk asbestos: Bulk asbestos samples ***must*** be delivered in a wide mouth ***glass*** jar.

Shipping with ice: Sample labels fall off or are unreadable if they get wet. If you must ship with ice, please ensure that the ice is well contained in leak proof bags. ***Please always seal forms in a separate plastic bag.***

Nitrate, nitrite, and o-phosphate: These analytes appear twice on CSD form 5 for drinking water. This is because they can be measured from an unpreserved sample, but only if the sample arrives at the laboratory within 48 hours of sampling. An alternate method is available when the samples arrive past their 48 hour hold time (Total Nitrate/Nitrite can be analyzed from the ammonia bottle and Total Phosphorous can be analyzed from the metals bottle). If you expect your samples to arrive within 48 hours, then mark the appropriate box(es) for the 48 hour holding group on the form. You can send a preserved bottle as a back-up. If you know your samples will not arrive on time, request "Total Nitrate-Nitrite" and "Total Phosphorus" and submit a preserved bottle. For wastewater, total phosphorus is often required by regulations. For drinking water, o-phosphate is the preferred method.

Blanks: Blanks are a common source of confusion because there are different kinds of blanks:

- The **equipment blank**, sometimes referred to as the **rinseate blank**, is an organic or aqueous solution that is as free of analyte as is possible and is transported to the site, opened in the field, poured over or through the sample collection device, collected in a sample container, preserved with appropriate reagents and shipped to the laboratory. This serves as a check on sampling device cleanliness, and will be affected by the site and sample handling conditions. This type of blank will be analyzed in the laboratory just like any other sample. The project officer should check to see that there are no problems with the equipment blank when results are received.

- The **blank sample / lot blank** is an analyte free media sample from the same lot of media used for sample collection that is brought to the field and submitted with the rest of the samples from that field operation. This

serves to determine background. This is most often used with industrial hygiene media (filters, badges, charcoal tubes, wipes).

- The **Field Reagent Blank (FRB)** or **Trip Blank**, pertains to analysis of Volatile Organic Compounds (VOCs), Total Tri-Halo Methanes (TTHMs), and Ethylene Dibromide / 1,2-Dibromo-3-chloropropane (EDB/DBCP). Triplicate (VOC, TTHM) and duplicate (EDB/DBCP) FRBs ***must*** be handled along with each sample set, which is composed of the samples collected from the same general sample site at approximately the same time. At the laboratory, FRB sample bottles are filled with reagent water and sample preservatives, sealed, and shipped to the sampling site along with empty sample bottles and shipped back to the laboratory with filled sample bottles. FRBs must remain sealed until analysis. Holding time of FRBs start with sampling date of associated samples.

Required Blanks:

- For VOCs: Trip blanks in triplicate. **NOTE:** VOC trip blanks in duplicate for Deployment 40 mL Drinking Water Kits.

- For EDB/DBCP: Trip blanks in duplicate. **NOTE:** A single EDB/DBCP trip blanks for Deployment 40 mL Drinking Water Kits.

- For IH samples: Two lot blanks per ten samples*

* Our industrial hygiene analytical runs for metals require that we spike blank filters with a known amount of analyte. This lets us know if there is any interference on the media that prevent recovery of the analyte. This spike test is most meaningful if we are using filters from the same lot as the samples. Therefore, for the best quality data send two additional blanks per sample shipment.

Fingerprint Compounds: A bulk sample (about 5 mL in a 40 mL vial) of the compound should be submitted for use as a method reference. Please ensure the vial is sealed tightly so that submitted media are not contaminated, or ship bulk samples individually.

SECTION 5
CUSTOMER SATISFACTION

The Department of Laboratory Sciences values you as a customer. Our staff is dedicated to providing quality service. In every mailing of reports we include a Customer Satisfaction Survey. ***Please take time to fill out the survey.*** DLS' Management Review Team reads and discusses each one. If necessary, corrective or preventive action will be initiated.

The key to good customer service is communication. Please keep us informed by phone, fax, or **usachppmeur.dlshotline@amedd.army.mil** of any changes in your sampling dates, number of samples, or requirements. We in turn will keep you informed of changes or problems as they arise.

Customers are encouraged to arrange a tour of our laboratory facilities and/or conduct a client audit. To arrange a tour or audit, please contact the Quality Assurance Division at DSN 314-486-7771 or 314-486-6409 or send your request to: **usachppmeur.dlshotline@amedd.army.mil**

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— APPENDIX A —
SAMPLING GUIDE

SAMPLE PRESERVATION

Use the correct personal protective equipment (PPE) of safety glasses, gloves, and protective clothing when working with acids or bases.

A-1 Keep Cool

Keep cool means maintain a temperature of 1 – 6 °C. A large cooler requires ~20 lbs. of frozen ice packs to maintain this temperature.

A-2 Acid to pH < 2

Strictly adhere to acid type listed in the Tables of Appendix A.

HCl: Hydrochloric Acid (2X)
HNO_3: Nitric Acid (4X)
H_2SO_4: Sulfuric Acid (2X)

1000 mL bottle:	5	mL of either 2X or 4X acid
500 mL bottle:	2.5	mL either of 2X or 4X acid
250 mL bottle:	1	mL of either 2X or 4X acid
125 mL bottle:	0.5	mL of either 2X or 4X acid
40 mL bottle:	4	drops of either 2X or 4X acid

A 2X solution refers to a solution containing one part of concentrated acid and one part of de-ionized water.

A 4X solution refers to a solution containing one part of concentrated acid and three parts of de-ionized water.

When preparing these solutions, ***always add the concentrated acid to the water to prevent spattering.***

A-3 Base to pH > 12

NaOH: Sodium Hydroxide

NaOH is a highly caustic base provided in solid pellet form.

1000 mL bottle: Add 16 NaOH pellets and mix well after sampling.
500 mL bottle: Add 8 NaOH pellets and mix well after sampling.
40 mL bottle: Add 1 NaOH pellet and mix well after sampling.

I – Organic Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
Aldehydes (Reported as Formaldehyde)	WW	1 – 6 °C	Glass Teflon™ Lined Cap	48 Hr	500 mL	GCL In-House Steam Distillation UV/VIS
AOX	W	1 – 6 °C HNO_3 to pH < 2	Glass Teflon™ Lined Cap	5 Days	500 mL	GCL DIN EN 1485 H14
BTEX	S Gas	Ambient Temperature	Tedlar Bag	48 Hr	2000 mL	GCL In-House GC-MSD
			Charcoal Tube	7 Days		
BTEX & Aromatic Hydrocarbons	S Gas	Ambient Temperature	Tedlar Bag	48 Hr	2000 mL	GCL In-House GC-MSD
			Charcoal Tube	7 Days		
BTEX and / or CHCs	W	1 – 6 °C 25 mg Ascorbic Acid HCl to pH < 2 ***No headspace***	Amber Glass Teflon™ Lined Cap	14 Days	40 mL Vials (3 each)	EPA 524.2 EPA 8260B
	S	1 – 6 °C	Amber Glass Teflon™ Lined Cap	14 Days	100g	EPA 8260B
					40 mL Vials (2 each)	
Carbamate Pesticides	W	1 – 6 °C 4 mg Sodium Thiosulfate 1.5 mL 2.5M Monochloro Acetic Acid Buffer	Glass Teflon™ Lined Cap	28 Days	40 mL Vials (2 each)	EPA 531.1
CHC	S Gas	Ambient Temperature	Tedlar Bag	48 Hr	2000 mL	GCL In-House GC-MSD
			Charcoal Tube	7 Days		
CHC & Vinyl Chloride	S Gas	Ambient Temperature	Tedlar Bag	48 Hr	2000 mL	GCL In-House GC-MSD
			Charcoal Tube	7 Days		
Dalapon	W	1 – 6 °C 40 mg Sodium Thiosulfate	Amber Glass Teflon™ Lined Cap	14 Days	500 mL	UCL EPA 515.3
Di-(2-ethyl-hexyl)-Adipate (DEHA) & Di-(2-ethyl-hexyl)-phthalate (DEHP)	W	1 – 6 °C 80 mg Sodium Thiosulfate	Amber Glass Teflon™ Lined Cap	14 Days	500 mL	GCL In-House GC-MSD
	W	1 – 6 °C 80 mg Sodium Thiosulfate 5mL HCl to pH < 2	Amber Glass Teflon™ Lined Cap	14 Days	1000 mL	UCL EPA 506 (mod)
Dioxin	W	1 – 6 °C 100 mg Sodium Thiosulfate	Amber Glass Teflon™ Lined Cap	30 Days	2000 mL	UCL EPA 1613 (mod)
	W	1 – 6 °C 80 mg Sodium Thiosulfate If pH > 9 adjust to pH 7-9 with H_2SO_4	Amber Glass Teflon™ Lined Cap	1 Year	1000 mL	GCL EPA 1613 1990-04
Diquat & Paraquat	W	1 – 6 °C 100 mg Sodium Thiosulfate 5 mL H_2SO_4 to pH < 2	Amber PVC & Amber PVC Cap	7 Days	1000 mL	UCL EPA 549.2

I – Organic Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
Dry Weight	S	1 – 6 °C	Glass Teflon™ Lined Cap	6 Months	50 g	In-house Method
	S	1 – 6 °C	Glass Teflon™ Lined Cap	6 Months	50 g	GCL DIN 38409 H1
Ethylenedibromide (EDB) & 1,2-Dibromo-3-chloropropane (DBCP)	W	1 – 6 °C 3 mg Sodium Thiosulfate ***No headspace***	Amber Glass Teflon™ Lined Cap	14 Days	40 mL Vials (2 each)	EPA 504.1
Endothall	W	1 – 6 °C 40 mg Sodium Thiosulfate	Amber Glass Teflon™ Lined Cap	7 Days	500 mL	UCL EPA 548.1
EOX	W	1 – 6 °C	Glass Teflon™ Lined Cap	7 Days	100 mL	GCL DIN 38409 H8
Explosives	W	1 – 6 °C	Amber Glass Teflon™ Lined Cap	7 Days	1000 mL	UCL CAD 13.2
	W	1 – 6 °C	Amber Glass Teflon™ Lined Cap Wrapped in Aluminum Foil	3 Days	1000 mL	GCL DIN 38407 F21
	S	1 – 6 °C	Amber Glass Teflon™ Lined Cap Wrapped in Aluminum Foil	3 Days	100g	GCL DIN 38407 F21
Glyphosate	W	1 – 6 °C 4 mg Sodium Thiosulfate	Amber Glass Teflon™ Lined Cap	14 Days	40 mL Vials (2 each)	UCL EPA 547
Herbicides	W	1 – 6 °C 25 mg Sodium Sulfite HCl to pH < 2	Amber Glass Teflon™ Lined Cap	14 Days	500 mL	EPA 555 mod
	S	1 – 6 °C	Glass Teflon™ Lined Cap	5 Days	100 g	GCL DIN 38407 F14 GC/MS Derivatization
Hydrocarbon Index (Mineral Oil)	W	1 – 6 °C	Glass Teflon™ Lined Cap	5 Days	500 mL	GCL DIN EN ISO 9377-2 (H53) GC/FID
	S	1 – 6 °C	Glass Teflon™ Lined Cap	5 Days	100 g	GCL ISO/TR 11046 GC/FID
Nitrated Organic Solvents	WW	1 – 6 °C	Amber Glass Teflon™ Lined Cap	7 Days	1000 mL	GCL DIN 38407 F2
Oil & Grease (Saponifiable)	WW	1 – 6 °C	Glass Teflon™ Lined Cap	48 Hr	1000 mL	GCL In-House Gravimetric Method
PCBs	W	1 – 6 °C 50 mg Sodium Sulfite	Amber Glass Teflon™ Lined Cap	7 Days	1000 mL	EPA 508
	S	1 – 6 °C	Glass Teflon™ Lined Cap	6 Months	100 g	GCL DIN 38414 S20 GC-MSD

I – Organic Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
PCBs	O	1 – 6 °C	Amber Glass Teflon™ Lined Cap	6 Months	40 mL	GCL DIN 38407
Pentachlorophenol (PCP)	S	1 – 6 °C	PE or Glass Teflon™ Lined Cap	5 Days	100 g	GCL In-House GC-MSD Derivatization
Perchlorate	W	1 – 6 °C	PE	28 Days	125 mL	UCL EPA 314.0
Pesticides, Chlorinated	W	1 – 6 °C 50 mg Sodium Sulfite HCl to pH < 2	Amber Glass Teflon™ Lined Cap	14 Days	1000 mL	GCL In-House GC-MSD
	S	1 – 6 °C	Amber Glass Teflon™ Lined Cap	5 Days	100 g	GCL In-House GC-MSD
Pesticides, Organophosphorus	W	1 – 6 °C 50 mg Sodium Sulfite HCl to pH < 2	Amber Glass Teflon™ Lined Cap	14 Days	1000 mL	GCL In-House GC-MSD
	S	1 – 6 °C	Amber Glass Teflon™ Lined Cap	5 Days	100 g	GCL In-House GC-MSD
Phenols, Chlorinated	W	1 – 6 °C H_2SO_4 to pH < 2 1g $CuSO_4$	Amber Glass Teflon™ Lined Cap	48 Hr	1000 mL	GCL In-House GC-MSD
Phenols, Total (Reported as Phenol)	W	1 – 6 °C – 1g $CuSO_4$ and H_2SO_4 to pH < 2.	Amber Glass Teflon™ Lined Cap	48 Hr	500 mL	GCL DIN EN ISO 14402
PAH	W	1 – 6 °C – 100 mg Sodium Thiosulfate HCl to pH < 2	Amber Glass Teflon™ Lined Cap	7 Days	1000 mL	EPA 550
	S	1 – 6 °C	Glass Teflon™ Lined Cap	5 Days	100 g	GCL In-House GC-MSD
Qualitative Identification of Unknown Material	W	1 – 6 °C	Amber Glass Teflon™ Lined Cap	Varies	1000 mL	Various
	S	1 – 6 °C	Glass Teflon™ Lined Cap	Varies	500 g	Various
Surfactants Ionic	W	1 – 6 °C 3 mL Chloroform	Glass Teflon™ Lined Cap	5 Days	500 mL	GCL DIN EN 903 H24
Surfactants Non-ionic	W	1 – 6 °C	Glass Teflon™ Lined Cap	8 Days	2000 mL	GCL DIN EN 903 H24
TPH MDL = 0.05 mg/L	W	1 – 6 °C HCl to pH < 2	Glass Teflon™ Lined Cap	14 Days	1000 mL	EPA 418.1
TPH MDL = 0.02 mg/L	W	1 – 6 °C HCl to pH < 2	Glass Teflon™ Lined Cap	14 Days	2000 mL	EPA 418.1
TPH	S	1 – 6 °C	Glass Teflon™ Lined Cap	28 Days	100 g	EPA 418.1 EPA 9071A
Toxicity, Acute (Daphnia Magna)	WW	Freeze -5 to -40 ºC	PE	14 Days Frozen	500 mL	GCL DIN 38412 L 30
Toxicity, Fish	WW	1 – 6 °C	PE	48 Hr 10 ºC 10 Days @ 4 ºC	4000 mL	GCL DIN 38412 L31
Trihalomethane Potential	Finished DW Only	1 – 6 °C ***No headspace***	Amber Glass Teflon™ Lined Cap	14 Days	40 mL Vial (3 each)	EPA 524.2

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I – Organic Analytes

Analyte	Matrix	Preservative	Container	MAX Holding Time	Volume	Method
TTHM	W	1 – 6 °C 25 mg Ascorbic Acid HCl to pH < 2 ***No headspace***	Amber Glass Teflon™ Lined Cap	14 Days	40 mL Vial (3 each)	EPA 524.2 EPA 8260B
	S	1 – 6 °C	Amber Glass Teflon™ Lined Cap	14 Days	100 g 40 mL Vial (2 each)	EPA 8260B
VOCs	W	1 – 6 °C 25 mg Ascorbic Acid HCl to pH < 2 ***No headspace***	Amber Glass Teflon™ Lined Cap	14 Days	40 mL Vial (3 each)	EPA 524.2 EPA 8260B
	S	1 – 6 °C	Amber Glass Teflon™ Lined Cap	14 Days	100 g 40 mL Vial (2 each)	EPA 8260B

— TABLE I NOTES —

All acronyms defined in Appendix B
GCL: German Contract Laboratory (ISO 17025 accredited)
UCL: US Contract Laboratory (ISO 17025 accredited)
DW: Drinking Water – *only!*
O: Oil
PE: Polyethylene or Nalgene™ Plastic
PVC: Polyvinyl Chloride
S: Soil, Sludge, or Bulk Solid
W: Water (drinking water, groundwater, bulk liquid, or wastewater)
WW: Wastewater – *only!*

SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

II – Inorganic Metal Analytes

Analyte	Matrix	Preservative	Container	MAX Holding Time	Volume	Method
Aluminum (Al)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
Antimony (Sb)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap s	6 Months	100 g	EPA 200.7
Arsenic (As)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7
Barium (Ba)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7
Beryllium (Be)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7

II – Inorganic Metal Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
Boron (B)	W	HNO_3 to pH < 2	PE Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
	DW			6 Months	100 mL	EPA 200.7
Cadmium (Cd)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
Cadmium (Cd)	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B
Calcium (Ca)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
	DW				1000 mL	EPA 200.7 EPA 7000B
Chromium (Cr)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B
Cobalt (Co)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B
Copper (Cu)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B
Iron (Fe)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	1000 mL	EPA 200.7 EPA 7000B
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B
Lead (Pb)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.8 EPA 7000B
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B
Lead & Copper (EPA Rule)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	500 mL	EPA 200.8
Magnesium (Mg)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
	DW				1000 mL	EPA 200.7 EPA 7000B
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 7000B
Manganese (Mn)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
	DW				1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7
Mercury (Hg)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN 1483 E12
				28 Days	1000 mL	EPA 200.8

II – Inorganic Metal Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
Mercury (Hg)	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	28 Days	100 g	EPA 7473
				6 Months	100 g	GCL DIN EN 1483
Molybdenum (Mo)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7
Nickel (Ni)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B
Phosphorus (P)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7
Potassium (K)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
	DW				1000 mL	EPA 200.7 EPA 7000B
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 7000B
Selenium (Se)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN 28405 D23
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 200.9
Silicon (Si)	W	HNO_3 to pH < 2	PE	6 Months	1000 mL	EPA 200.7
Silver (Ag)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7
Sodium (Na)	DW	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	1000 mL	EPA 200.7 EPA 7000B
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 7000B
Thallium (Tl)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
Vanadium (V)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	1000 mL	EPA 200.7
Zinc (Zn)	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	250 mL	GCL DIN EN ISO 11885 E22
					1000 mL	EPA 200.7 EPA 200.8
	S	1 – 6 °C if Wet RT if Dry	PE or Glass Teflon™ Lined Cap	6 Months	100 g	EPA 200.7 EPA 7000B

PLEASE SEE NEXT PAGE FOR TABLE II NOTES

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II – Inorganic Metal Analytes

Analyte	Matrix	Preservative	Container	MAX Holding Time	Volume	Method

— TABLE II NOTES —

All acronyms defined in Appendix B
GCL: German Contract Laboratory (ISO 17025 accredited)
UCL: US Contract Laboratory (ISO 17025 accredited)
DW: Drinking Water – *only!*
PE : Polyethylene or Nalgene™ Plastic
S: Soil, Sludge, or Bulk Solid
W: Water (drinking water, groundwater, bulk liquid, or wastewater)
WW: Wastewater – *only!*

SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.

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III – Inorganic Non-Metal Analytes

Analyte	Matrix	Preservative	Container	MAX Holding Time	Volume	Method
Alkalinity	W	1 – 6 °C ***No Headspace***	PE or Glass Teflon™ Lined Cap	14 Days	500 mL	SM 2320B
Ammonia	W	1 – 6 °C H_2SO_4 to pH < 2	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	EPA 350.3
Acid Capacity (4,3)	W	1 – 6 °C	Glass Teflon™ Lined Cap	48 Hr	250 mL	GCL DIN 38409 H7
Asbestos	DW	1 – 6 °C	Amber Glass Teflon™ Lined Cap	48 Hr	250 mL	UCL EPA 100.2
Base Capacity (8,2)	W	1 – 6 °C	Glass Teflon™ Lined Cap	48 Hr	250 mL	GCL DIN 38409 H7
BOD	W	1 – 6 °C	Glass Teflon™ Lined Cap	48 hours	1000 mL	GCL DIN EN 1899-1 H51
	WW	1 – 6 °C	PE or Glass Teflon™ Lined Cap	48 Hr	1000 mL	GCL DIN EN 1899-1 H51
	WW	-5 to -40 °C Freeze sample ***immediately*** after collection to extend holding time.	PE or Glass Teflon™ Lined Cap	30 Days ***If Frozen Immediately After Collection***	1000 mL	GCL DIN EN 1899-1 H51
Bromide	W	None	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	GCL DIN EN ISO 10303 D19
	W					EPA 300.0
Chloride	W	None	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	GCL DIN EN ISO 10303 D19
	W				250 mL	EPA 300.0
COD	W	H_2SO_4 to pH < 2	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	EPA 410.4
	W	H_2SO_4 to pH < 2	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	GCL DIN EN ISO 10304 D19
Color, Apparent	W	1 – 6 °C	PE Teflon™ Lined Cap	48 Hr	250 mL	SM 2120B
Conductivity	W	1 – 6 °C No Headspace	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	SM 2510B
	W	1 – 6 °C	PE	48 Hr	100 mL	GCL DIN EN 27888 C8
Cyanide, Free	W	1 – 6 °C NaOH to pH > 12	Amber Glass Teflon™ Lined Cap	14 Days	500 mL	SM4500-CN-F
Cyanide, Total	W	1 – 6 °C NaOH to pH > 12	Glass Teflon™ Lined Cap	48 Hr	250 mL	GCL DIN EN 14403

III – Inorganic Non-Metal Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
Fluoride	W	None	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	GCL DIN 38405 D4
	W				250 mL	EPA 300.0
Hardness	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	500 mL	SM 2340B
Hydrogen Sulfide	W	1 – 6 °C 0.5 mL 2N Zinc Acetate NaOH to pH > 9	Amber Glass Teflon™ Lined Cap	7 Days	500 mL	GCL DIN 38405 D26
Kjeldahl Nitrogen	W	1 – 6 °C H_2SO_4 to pH < 2	PE or Glass Teflon™ Lined Cap	28 Days	1000 mL	GCL DIN 25663 H11
Langelier Index (Saturation Index)	***Langelier Index requires on-site temperature and pH be supplied by the Customer. Additionally customers must request TDS, alkalinity and calcium analyses.***					
Nitrate, as N	W	1 – 6 °C	PE or Glass Teflon™ Lined Cap	48 hours	500 mL	GCL DIN EN ISO 10304 D19
	W				250 mL	EPA 300.0
Nitrite, as N	W	1 – 6 °C	PE or Glass Teflon™ Lined Cap	48 hours	500 mL	GCL DIN EN 26777 D10
	W				250 mL	EPA 300.0
Odor	W	1 – 6 °C	PE or Glass Teflon™ Lined Cap	48 hours	1000 mL	SM 2150B
Oxidizability	W	1 – 6 °C H_2SO_4 to pH <2	Glass Teflon™ Lined Cap	7 Days	1000 mL	GCL DIN EN ISO 8467 H5
o-Phosphate	W	1 – 6 °C	PE or Glass Teflon™ Lined Cap	48 hours	500 mL	GCL DIN EN 1189 D11
	W				250 mL	EPA 300.0
pH	S	1 – 6 °C	PE or Glass Teflon™ Lined Cap	7 Days	100 g	EPA 9045C
	W	1 – 6 °C No Headspace	PE or Glass Teflon™ Lined Cap	7 Days	250 mL	EPA 150.1
Phosphorus, Total	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	1000 mL	EPA 200.7
	WW	None	PE	6 Months	250 mL	GCL DIN EN ISO 11885 E22
Settleable Matter (by volume)	W	1 – 6 °C	PE	48 Hr	1000 mL	GCL DIN 38409 H9
Sulfate	DW	1 – 6 °C	PE or Glass Teflon™ Lined Cap	28 Days	500 mL	GCL DIN EN ISO 10304 D19
	W				250 mL	EPA 300.0
Sulfite	WW	1 – 6 °C	PE	48 hours	50 mL	GCL DIN EN ISO 10304 D20
TDS	W	1 – 6 °C	PE or Glass Teflon™ Lined Cap	7 Days	500 mL	SM 2540C
Total Nitrate-Nitrite	W	H_2SO_4 to pH < 2	PE or Glass Teflon™ Lined Cap	28 Days	250 mL	EPA 300.0
TSS	W	1 – 6 °C	PE or Glass Teflon™ Lined Cap	7 Days	500 mL	EPA 160.2
Turbidity	W	1 – 6 °C	PE or Glass \ Teflon™ Lined Cap	48 hours	250 mL	EPA 180.1

III – Inorganic Non-Metal Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
TOC	W	1 – 6 °C	Glass Teflon™ Lined Cap	7 Days	100 mL	GCL DIN EN 1484 H3

— TABLE III NOTES —

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GCL: German Contract Laboratory (ISO 17025 accredited)
UCL: US Contract Laboratory (ISO 17025 accredited)
PE: Polyethylene or Nalgene™ Plastic
W: Water (drinking water, groundwater, bulk liquid, or wastewater)
WW: Wastewater – *only!*

SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.

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IV – Radionuclide Analytes						
Analyte	**Matrix**	**Preservative**	**Container**	**MAX Holding Time**	**Volume**	**Method**
Gross Alpha	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	1000 mL	EPA 900
Gross Beta	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	1000 mL	EPA 900
Radium 226 & Radium 228	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	4000 mL	UCL In-house S6001
Strontium 90	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	2000 mL	UCL In-house S9001
Tritium	W	None	PE or Glass Teflon™ Lined Cap	6 Months	500 mL	UCL EPA H-02
Uranium	W	HNO_3 to pH < 2	PE or Glass Teflon™ Lined Cap	6 Months	1000 mL	UCL ASTM D5174

— TABLE IV NOTES —

All acronyms defined in Appendix B
GCL: German Contract Laboratory (ISO 17025 accredited)
UCL: US Contract Laboratory (ISO 17025 accredited)
PE: Polyethylene or Nalgene™ Plastic
W: Water (drinking water, groundwater, bulk liquid, or wastewater)

SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

V – Organic Analytes: Deployment 40 mL Drinking Water Kit (Screen)						
Analyte	**Method**	**MAX Holding Time**	**Vial Required**	**Preservative**	**Container**	**Matrix**
Carbamate Pesticides	EPA 531.1 (mod.)	28 Days	40 mL	1 - 6 °C 4 mg Sodium Thiosulfate 1.5 mL 2.5M Monochloro Acetic Acid Buffer	Amber Glass Teflon™ Lined Cap	Finished Drinking Water
Ethylenedibromide (EDB) & 1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1	14 Days	40 mL (2 each) ***plus*** 40 mL Blank	1 – 6 °C 3 mg Sodium Thiosulfate	Amber Glass Teflon™ Lined Cap	
Herbicides	EPA 555 (mod.)	14 Days	40 mL (2 each)	1 - 6 °C 2 mg Sodium Sulfite HCl to pH < 2	Amber Glass Teflon™ Lined Cap	
Pesticides	EPA 508.1 CL DIN 38407 F2 GC-MSD	14 Days	125 mL	1 - 6 °C 7 mg Sodium Sulfite HCl to pH < 2	Glass Teflon™ Lined Cap	

V – Organic Analytes: Deployment 40 mL Drinking Water Kit (Screen)						
PAH	EPA 550	7 Days	125 mL	1 - 6 °C 13 mg Sodium Thiosulfate HCl to pH < 2	Glass Teflon™ Lined Cap	
VOCs (Regulated)	EPA 524.2	14 Days	40 mL (3 each) ***plus*** 40 mL (2 each) Blank	1 - 6 °C 25 mg Ascorbic Acid HCl to pH < 2 No Headspace	Amber Glass Teflon™ Lined Cap	

— TABLE V NOTES —

Acronyms: All acronyms defined in Appendix B
SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.
NOTE: The Deployment 40 mL Drinking Water Kit was developed to screen drinking water for a limited list of contaminants. The Deployment 40 mL Drinking Water Kit ***cannot*** be used for drinking water compliance testing. The reduced volume (40 mL) of the Kit does not allow for full quality control procedures to be performed for all methods and is not suitable for dealing with matrix interference problems and repeat analyses are severely limited due to the 40 mL volume of the Kit. ***The Deployment 40 mL Drinking Water Kit is not suitable for raw water, ground water, surface water, or any bulk liquid sampling and testing.***

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

VI – Inorganic Metal Analytes & Hardness: Deployment 40 mL Drinking Water Kit (Screen)						
Analyte	**Method**	**MAX Holding Time**	**Vial Required**	**Preservative**	**Container**	**Matrix**
Aluminum (Al)	EPA 200.8	6 Months	40 mL (2 each)	HNO_3 to pH < 2	Amber Glass Teflon™ Lined Cap	Finished Drinking Water
Antimony (Sb)	EPA 200.8					
Arsenic (As)	EPA 200.8					
Barium (Ba)	EPA 200.8					
Beryllium (Be)	EPA 200.8					
Cadmium (Cd)	EPA 200.8					
Calcium (Ca)	EPA 7000B					
Chromium (Cr)	EPA 200.8					
Copper (Cu)	EPA 200.8					
Iron (Fe)	EPA 7000B					
Lead (Pb)	EPA 200.8					
Magnesium (Mg)	EPA 7000B					
Manganese (Mn)	EPA 200.8					
Mercury (Hg)	EPA 200.8					
Nickel (Ni)	EPA 200.8					
Silver (Ag)	EPA 200.8					
Selenium (Se)	EPA 200.8					
Sodium (Na)	EPA 7000B					
Thallium (Tl)	EPA 200.8					
Hardness (Calculated from Ca & Mg data)	SM 2340B					

— TABLE VI NOTES —

All acronyms defined in Appendix B
SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.
NOTE: The Deployment 40 mL Drinking Water Kit was developed to screen drinking water for a limited list of contaminants. The Deployment 40 mL Drinking Water Kit ***cannot*** be used for drinking water compliance testing. The reduced volume (40 mL) of the Kit does not allow for full quality control procedures to be performed for all methods and is not suitable for dealing with matrix interference problems and repeat analyses are severely limited due to the 40 mL volume of the Kit. ***The Deployment 40 mL Drinking Water Kit is not suitable for raw water, ground water, surface water, or any bulk liquid sampling and testing.***

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VII – Radionuclide Analytes: Deployment 40 mL Drinking Water Kit (Screen)						
Analyte	**Method**	**MAX Holding Time**	**Vial Required**	**Preservative**	**Container**	**Matrix**
Gross Alpha Gross Beta	EPA 900	6 Months	125 mL	HNO_3 to pH < 2	Glass Teflon™ Lined Cap	Finished Drinking Water

— TABLE VIII NOTES —

All acronyms defined in Appendix B

SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.

NOTE: The Deployment 40 mL Drinking Water Kit was developed to screen drinking water for a limited list of contaminants. The Deployment 40 mL Drinking Water Kit ***cannot*** be used for drinking water compliance testing. The reduced volume (40 mL) of the Kit does not allow for full quality control procedures to be performed for all methods and is not suitable for dealing with matrix interference problems and repeat analyses are severely limited due to the 40 mL volume of the Kit. ***The Deployment 40 mL Drinking Water Kit is not suitable for raw water, ground water, surface water, or any bulk liquid sampling and testing.***

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VIII – Inorganic Non-metal Analytes: Deployment 40 mL Drinking Water Kit (Screen)						
Analyte	**Method**	**MAX Holding Time**	**Vial Required**	**Preservative**	**Container**	**Matrix**
Alkalinity	SM 2320B	7 Days	125 mL	1 – 6 °C No Headspace	Glass Teflon™ Lined Cap	Finished Drinking Water
Conductivity	SM 2510	28 Days				
pH	EPA 150.1	14 Days				
TDS	SM 2540C	7 Days				
Ammonia	EPA 350.3	28 Days	40 mL	1 – 6 °C H_2SO_4 to pH < 2	Glass Teflon™ Lined Cap	
Color, Apparent	SM 2120B	48 Hours	40 mL	1 – 6 °C No Headspace	Glass Teflon™ Lined Cap	
Turbidity	EPA 180.1					
Chloride	EPA 300.0	28 Days	40 mL	1 – 6 °C	Amber Glass Teflon™ Lined Cap	
Fluoride						
Sulfate						
Cyanide, Free	SM 4500-CN-F	14 Days	40 mL	1 – 6 °C NaOH to pH > 12	Amber Glass Teflon™ Lined Cap	
Total Nitrate/Nitrite	EPA 300.0	28 Days	40 mL	1 – 6 °C H_2SO_4 to pH < 2	Amber Glass Teflon™ Lined Cap	

— TABLE VII NOTES —

All acronyms defined in Appendix B

SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.

NOTE: The Deployment 40 mL Drinking Water Kit was developed to screen drinking water for a limited list of contaminants. The Deployment 40 mL Drinking Water Kit ***cannot*** be used for drinking water compliance testing. The reduced volume (40 mL) of the Kit does not allow for full quality control procedures to be performed for all methods and is not suitable for dealing with matrix interference problems and repeat analyses are severely limited due to the 40 mL volume of the Kit. ***The Deployment 40 mL Drinking Water Kit is not suitable for raw water, ground water, surface water, or any bulk liquid sampling and testing.***

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IX – Organic Analytes: IH						
Analyte	**Sampling Method**	**Analysis Method ①**	**Sampler / Media**	**Sampling Rate**	**Sample Volume**	**Max Holding Time / Storage**
Acetic Acid	NIOSH 1603	UCL NIOSH 1603	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 1.0 L/min	20 – 300 L	7 Days RT
Acetone	NIOSH 1300	GCL DFG LM #4 UCL NIOSH 1300	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	0.5 – 3 L	14 Days 1 - 6 °C
Benzene	NIOSH 1501	GCL DFG LM #4 UCL NIOSH 1501	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	≤ 0.2 L/min	5 – 30 L	14 Days RT
	3M™	UCL NIOSH 1501	OVM 3M™ 3520	0.25 – 8 hours②	③	21 Days RT
Carbon Tetrachloride (Tetrachloromethane)	NIOSH 1003	GCL DFG LM #4 UCL NIOSH 1003	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	3 – 150	14 Days RT
	OSHA 7			≤ 0.2 L/min	15 L	
Desflurane	OSHA 29 mod.	UCL OSHA 29 mod.	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	≤ 0.1 L/min	10 L	15 Days 1 – 6 °C
Desflurane	3M™	UCL OSHA 29 mod.	OVM 3M™ 3520	0.25 L/min 8 hours ②	③	21 Days RT
Elemental Carbon (Diesel Particulate, Diesel Engine Emission)	NIOSH 5040	UCL BIA 7050	Quartz Fiber Filter 37 mm Diameter	2 – 4 L/min	142 – 19,000 L	Not Defined
	BIA 7050		Glass Fiber Filter 47 or 70 mm Diameter	2 – 10 L/min	500 – 1000 L	28 Days RT
Ethanol (Ethyl Alcohol)	NIOSH 1400	GCL DFG LM #4 UCL NIOSH 1400	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	0.1 – 1 L	14 Days -5 to -40 °C
Ethylacetate	NIOSH 1457	GCL DFG LM #4 UCL NIOSH 1457	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	0.1 – 10 L	6 Days 1 – 6 °C
Ethylbenzene	NIOSH 1501	GCL DFG LM #4 UCL NIOSH 1501	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	≤ 0.2 L/min	1 – 24 L	14 Days RT
	3M™	UCL NIOSH 1501	OVM 3M™ 3520	0.25 L/min 8 hours ②	③	21 Days RT
Fingerprint Compounds	NIOSH 1550	GCL DFG LM #2 UCL NIOSH 1550	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	1.3 – 20 L	7 Days RT
(MOGAS, JP8, Diesel, Kerosene, Naphtha, Kerosene, Mineral Spirits, Petroleum Ether, Stoddard Solvent)						
Formaldehyde	NIOSH 2541	UCL NIOSH 2541	Solid Sorbent Tube 10% 2-Hydroxy-methylpiperidine on XAD-2 120mg / 60mg.	0.01 – 0.1 L/min	1 – 36 L	21 Days RT
	NIOSH 2016	UCL NIOSH 2016	Diffuse Sampler SKC UMEx 100	0.25 – 24 hours	③	21 Days 1 – 6 °C

IX – Organic Analytes: IH						
Analyte	**Sampling Method**	**Analysis Method ①**	**Sampler / Media**	**Sampling Rate**	**Sample Volume**	**Max Holding Time / Storage**
Glutaraldehyde	NIOSH 2532	UCL NIOSH 2532	Solid Sorbent Tube Silica Gel coated with 2,4-Diphenyl-hdrazine HCl 300 mg / 150 mg	0.05 – 0.5 L/min	1 – 30 L	30 Days RT
Halothane	OSHA 29	UCL OSHA 29	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	≤0.1 L/min	10 L	15 Days 1 – 6 °C
	3M™		OVM 3M™ 3520	0.25 L/min 8 hours ②	③	21 Days RT
Hexamethylene Diisocyanate (HDI)	OSHA 42	UCL OSHA 42	Treated Filter (ORBO 80 Filter or equivalent)	1 L	15 – 240 L	Not Defined
Iso-Butylacetate	NIOSH 1450	GCL DFG LM #4 UCL NIOSH 1450	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	1 – 10 L	14 Days RT
Isoflurane (Forane)	OSHA 29 mod.	UCL OSHA 29 mod.	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	≤ 0.1 L/min	10 L	15 Days 1 – 6 °C
	3M™		OVM 3M™ 3520	0.25 L/min 8 hours ②	③	21 Days RT
Isopropanol (Isopropylalcohol, 2-Propanol)	NIOSH 1400	GCL DFG LM #4 UCL NIOSH 1400	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	0.3 – 3 L	14 Days -5 to -40 °C
Methylene Chloride (Dichloromethane)	NIOSH 1005	GCL DFG LM #2 UCL NIOSH 1005	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	0.5 – 2.5 L	14 Days 1 – 6 °C
Methylethyl Ketone (MEK, 2-Butanone)	NIOSH 2500	GCL DFG LM #4 UCL OSHA 16	Solid Sorbent Tube, beaded carbon 150 mg / 75 mg	0.01 – 0.2 L/min	0.25 – 12 L	90 Days -5 to -40 °C
	OSHA 16		Solid Torbent tube, silica 200 mg / 100m g	0.1 L/min	3 L	15 Days -5 to -40 °C
Methylisoamyl Ketone (MIAK)	NIOSH 1300	GCL DFG LM #4 UCL NIOSH 1300 mod	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	1 – 10 L	14 Days 1 – 6 °C
Methylisobutyl Ketone (MIBK)	NIOSH 1300	GCL DFG LM #4 UCL NIOSH 1300	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	1 – 10 L	14 Days 1 – 6 °C
Methyl Methacrylate	NIOSH 2537	UCL NIOSH 2537	Solid Sorbent Tube, XAD 2 400 mg / 200 mg	0.01 – 0.05 L/min	1 – 8 L	32 Days 1 – 6 °C
Nitrous Oxide	NIOSH 6600 OSHA 166	UCL NOISH 6600 OSHA 166	Passive Monitor KEM Medical	25 – 9,000 ppm-hours		Not Defined
Pentachlorophenol (PCP)	VDI 3870 / 4301	GCL VDI 3870 / 4301	Filter, Polyurethane Foam	3.5 L/min	≥420 L	14 Days 1 – 6 °C
Propylenglycol Monometylether Acetate (PGMEA) Methoxy-propyl-acetate	NIOSH 1450	GCL DFG LM #2	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	1 – 10 L	14 Days 1 – 6 °C

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IX – Organic Analytes: IH						
Analyte	**Sampling Method**	**Analysis Method ①**	**Sampler / Media**	**Sampling Rate**	**Sample Volume**	**Max Holding Time / Storage**
Sevoflurane	OSHA 29 mod	UCL OSHA 29 mod.	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.1 L/min	10 L	15 Days 1 – 6 °C
	3M™		OVM 3M™ 3520	0.25 L/min 8 hours ②	③	21 Days RT
Tert-Butylacetate	NIOSH 1450	CGL DFG LM #4 UCL NIOSH 1450	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	1 – 10 L	14 Days RT
Tetrachloroethene (PCE)	NIOSH 1003	GCL DFG LM #2 UCL NIOSH 1003	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	0.01 – 0.2 L/min	0.2 – 40 L	14 Days 1 – 6 °C
Toluene	NIOSH 1501	GCL DFG LM #4 UCL NIOSH 1501	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	≤ 0.2 L/min	1 – 8 L	14 Days 1 – 6 °C
	3M™	UCL NIOSH 1501	OVM 3M™ 3520	0.25 L/min 8 hours ②	③	21 Days RT
Toluene Diisocyanate (2,4-TDI / 2,6-TDI)	OSHA 42	UCL OSHA 42	Treated Filter (ORBO 80 or Equivalent)	1 L/min	15 – 240 L	Not Defined
Xylene	NIOSH 1501	GCL DIN 34807 F9 UCL NIOSH 1501	Solid Sorbent Tube Coconut Shell Charcoal 100 mg / 50 mg	≤ 0.2 L/min	2 – 23 L	14 Days 1 – 6 °C
	3M™	UCL NIOSH 1501	OVM 3M™ 3520	0.25 L/min 8 hours ②	③	21 Days RT

— TABLE IX NOTES —

All acronyms defined in Appendix B
GCL: German Contract Laboratory (ISO 17025 accredited)
UCL: US Contract Laboratory (ISO 17025 accredited)
BIA: Berufsgenossenschaftliches Institut für Arbeitsschutz (German Institute for Occupational Safety and Health)
DFG: Deutsche Forschungsgemeinschaft (German Research Society)
LM #2 / LM #4: Analytical Methods for Air Analysis – Solvent Mixtures Method #2 / Method #4
RT: Room Temperature
VDI: Verein Deutscher Ingenieure (German Society of Engineers)
① All Organic IH analyses are performed at contract laboratories. When the methodology allows, a local contract lab will be used to perform the analysis.
② The recommended sampling time is 8 hours. However, if the target analyte's concentration is high, short term sampling may be performed.
③ When calculating the sample volume, please refer to the manufacturer references on sampling rates.
NOTE: *The quality of your data can be compromised by the quality of the containers, preservatives, sampling technique, temperature control, packaging, and shipping employed. Please ensure you use* ***only*** *environmentally certified containers, collection media of a single lot that has* ***not*** *expired, appropriate analytical quality preservatives (e.g., ACS, trace metal analyzed, etc.), and you use approved sample collection procedures.*

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

X – Inorganic Analytes: IH					
Analyte	**Method**	**Sampler & Media**	**Sampling Rate / Container**	**Sample Volume**	
				Minimum	**Maximum**
Asbestos Fibers (SEM)	GCL VDI 3492	Filter Polycarbonate Membrane Capillary Gold Plated 0.8 µm Pore Size	8 – 30 L/min	3840 L	14400 L

X – Inorganic Analytes: IH					
Analyte	**Method**	**Sampler & Media**	**Sampling Rate / Container**	**Sample Volume**	
				Minimum	**Maximum**
Asbestos Fibers (TEM)	UCL NIOSH 7402	Filter 0.45 to 1.2 µm Cellulose Ester Membrane (MCE) 0.25 mm Conductive Cowl on Cassette	0.5 – 16 L/min	400 L	Adjust volume to achieve 100 – 1300 fibers/mm^2
Asbestos, Bulk	EPA 600 R93 -116	Bulk	Large Mouthed Glass Jar	1 g of Material	10 g of Material
Arsenic (As)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	5 L	2000 L
Beryllium (Be)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	1250 L	2000 L
Cadmium (Cd)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	13 L	2000 L
	OSHA 121		2 L/min	480 L	960 L
Chromium (Cr)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	5 L	1000 L
	OSHA 121		2 L/min	480 L	960 L
Cobalt (Co)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	25 L	2000 L
	OSHA 121		2 L/min	480 L	960 L
Copper (Cu)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	50 L	1000 L
	OSHA 121		2 L/min	480L	960 L
Dust, Total	GCL NIOSH 0500	Filter 37 mm 5 µm PVC **PREWEIGHED**	1.0 – 2.0 L/min	25 L	133 L (Reduce collection volume if 5 mg of dust is exceeded)
Dust, Respirable	UCL NIOSH 0600	Filter 37 mm 5 µm PVC **PREWEIGHED**	1.7 L/min	20 L	400 L
Fibers (Asbestos) (Bulk sample desired)	NIOSH 7400	Filter 0.45 to 1.2 µm Cellulose Ester Membrane (MCE) 0.25 mm Conductive Cowl on Cassette	0.5 – 16 L/min (Maximum 2.5 L/min for Excursion)	400 L (Minimum 48 L for Excursion)	1300 L (Reduce volume if 5 mg of dust will be exceeded)
	UCL NIOSH 7400				
Iron (Fe)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	5 L	100 L
	OSHA 121	Filter 0.8 µm Cellulose Ester Membrane (MCE)	2 L/min	480 L	960 L
Lead (Pb)	NIOSH 7082	Filter 0.8 µm Cellulose Ester Membrane (MCE) 37 mm	1 – 4 L/min	200 L	1500 L
	OSHA 121	Filter 0.8 µm Cellulose Ester Membrane (MCE) 37 mm	2 L/min	480 L	960 L
Lead Based Paint	EPA 7000B	Bulk (chips)	Rigid Container	1 g	1 g
Lead Wipes	EPA 7000B	Disposable Wipe	Rigid Container	30 – 100 cm²	30 – 100 cm²
	Note: "Wipe" must meet ASTM E 1792 specifications.				
Manganese (Mn)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	5 L	200 L

X – Inorganic Analytes: IH					
Analyte	**Method**	**Sampler & Media**	**Sampling Rate / Container**	**Sample Volume**	
				Minimum	**Maximum**
Manganese (Mn)	OSHA 121	Filter 0.8 µm Cellulose Ester Membrane (MCE)	2 L/min	480 L	960 L
Metals Screen Wipes	OSHA 125	Smear Tabs ***(preferred)*** Filter Whatman 41 or 42	20 mL Glass Vial Polypropylene or Teflon Cap Liner ***(NO Metal Cap Liners)***	10 x 10 cm	10 x 10 cm
	Metals Analyzed: Be – Cd – Co – Cr – Cu – Fe – Mn – Ni – Pb – Zn				
	GCL DIN EN ISO 11885 E22	Smear Tabs ***(preferred)*** Filter Whatman 41 or 42	Zip Lock Bag	10 x 10 cm	10 x 10 cm
	Metals Analyzed: As – Cr – Cu – Pb				
Nickel (Ni)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	5 L	1000 L
	OSHA 121	Filter 0.8 µm Cellulose Ester Membrane (MCE)	2 L/min	480 L	960 L
Zinc (Zn)	NIOSH 7300	Filter 0.8 µm Cellulose Ester Membrane (MCE)	1 – 4 L/min	5 L	200 L
Zinc (Zn)	OSHA 121	Filter 0.8 µm Cellulose Ester Membrane (MCE)	2 L/min	480 L	960 L

— TABLE X NOTES —

All acronyms defined in Appendix B
GCL: German Contract Laboratory (ISO 17025 accredited)
UCL: US Contract Laboratory (ISO 17025 accredited)
SEM: Scanning Electron Microscopy
NOTE: *The quality of your data can be compromised by the quality of the containers, preservatives, sampling technique, temperature control, packaging, and shipping employed. Please ensure you use **only** environmentally certified containers, collection media of a single lot that has **not** expired, appropriate analytical quality preservatives (e.g., ACS, trace metal analyzed, etc.), and you use approved sample collection procedures.*

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

XI – DLS OEBGD Sampling Kit Contents					
Sample Container				**Preservative that *must* be added to each container *after* sampling**	**Analyte(s)**
Size	**Number**	**Type**	**Preservative**		
40 mL	2	Glass Teflon™ Lined Cap	4 mg Sodium Thiosulfate	1.5 mL 2.5M Monochloro Acetic Acid Buffer	Carbamates
40 mL	2	Amber Glass Teflon™ Lined Cap	3 mg Sodium Thiosulfate	None	EDB / DBCP
40 mL	2	Amber Glass Teflon™ Lined Cap	3 mg Sodium Thiosulfate	None	EDB / DBCP Blank Prepared at the laboratory with reagent water prior to shipment
40 mL	2	Amber Glass Teflon™ Lined Cap	4 mg Sodium Thiosulfate	None	Glyphosate
40 mL	3	Amber Glass Teflon™ Lined Cap	25 mg Ascorbic Acid	4 Drops HCl	VOC
40 mL	3	Amber Glass Teflon™ Lined Cap	25 mg Ascorbic Acid	None	VOC Blank Prepared at the laboratory with reagent water prior to shipment
500 mL	1	PE or Glass Teflon™ Lined Cap	None	None	Alkalinity, Conductivity, pH, TDS

XI – DLS OEBGD Sampling Kit Contents					
Sample Container				**Preservative that *must* be added to each container *after* sampling**	**Analyte(s)**
Size	**Number**	**Type**	**Preservative**		
500 mL	1	PE or Glass Teflon™ Lined Cap	None	2.5 mL H_2SO_4	Ammonia, Total Nitrate / Nitrite
500 mL	1	Glass Teflon™ Lined Cap	None	None	Asbestos
500 mL	1	Amber Glass Teflon™ Lined Cap	8 NaOH Pellets	None	Cyanide, Free
500 mL	1	Amber Glass Teflon™ Lined Cap	40 mg Sodium Thiosulfate	None	Dalapon
500 mL	1	Amber Glass Teflon™ Lined Cap	40 mg Sodium Thiosulfate	None	Endothall
500 mL	1	Amber Glass Teflon™ Lined Cap	25 mg Sodium Sulfite	2.5 mL HCl	Herbicides
1000 mL	1	Amber Glass Teflon™ Lined Cap	80 mg Sodium Thiosulfate	5 mL HCl	Adipate (DEHA) / Phthalate (DEPA)
1000 mL	1	PE or Glass Teflon™ Lined Cap	None	5 mL HNO_3	Gross Alpha / Beta
1000 mL	1	PE or Glass Teflon™ Lined Cap	None	None	Ions, Turbidity, Color, Odor, Nitrate, Nitrite, Total Nitrate / Nitrite
1000 mL	2	Amber Glass Teflon™ Lined Cap	100 mg Sodium Thiosulfate	None	Dioxin
1000 mL	1	Amber PVC & Amber PVC Cap	100 mg Sodium Thiosulfate	5 mL H_2SO_4	Diquat / Paraquat
1000 mL	1	PE or Glass Teflon™ Lined Cap	None	5 mL HNO_3	Metals, Hardness
1000 mL	1	Amber Glass Teflon™ Lined Cap	100 mg Sodium Thiosulfate	5 mL HCl	PAH
1000 mL	1	Amber Glass Teflon™ Lined Cap	50 mg Sodium Sulfite	None	PCB
1000 mL	1	Amber Glass Teflon™ Lined Cap	50 mg Sodium Sulfite	5 mL HCl	Pesticides

— TABLE XI NOTES —

All acronyms defined in Appendix B
OEBGD: Overseas Environmental Baseline Guidance Document (OEBGD)
PE: Polyethylene or Nalgene™ Plastic
PVC: Polyvinyl Chloride
SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

XII – DLS Deployment 40 mL Drinking Water Kit (Screen) Sampling Kit Contents					
Container				**Preservative that *must* be added to each container after sampling**	**Analytes**
Size	**Number**	**Type**	**Preservative**		
40 mL	1	Amber Glass Teflon™ Lined Cap	None	4 Drops H_2SO_4	Ammonia
40 mL	1	Amber Glass Teflon™ Lined Cap	4 mg Sodium Sulfite	1.5 mL 2.5M Monochloro Acetic Acid Buffer	Carbamates
40 mL	1	Amber Glass Teflon™ Lined Cap	None	None	Chloride, Fluoride, Sulfate
40 mL	1	Amber Glass Teflon™ Lined Cap	None	None	Color (Apparent), Turbidity
40 mL	1	Amber Glass Teflon™ Lined Cap	1 NaOH Pellet	None	Cyanide, Free
40 mL	2	Amber Glass Teflon™ Lined Cap	3 mg Sodium Thiosulfate	None	EDB / DBCP

XII – DLS Deployment 40 mL Drinking Water Kit (Screen) Sampling Kit Contents					
Container				Preservative that *must* be added to each container after sampling	Analytes
Size	Number	Type	Preservative		
40 mL	1	Amber Glass Teflon™ Lined Cap	3 mg Sodium Thiosulfate	None	EDB / DBCP Blank Prepared with reagent water at the laboratory prior to shipment
40 mL	2	Amber Glass Teflon™ Lined Cap	2 mg Sodium Sulfite	4 Drops HCl	Herbicides
40 mL	2	Amber Glass Teflon™ Lined Cap	None	4 Drops HNO_3	Metals, Hardness
40 mL	1	Amber Glass Teflon™ Lined Cap	None	4 Drops H_2SO_4	Total Nitrate-Nitrite
40 mL	3	Amber Glass Teflon™ Lined Cap	25 mg Ascorbic Acid	4 Drops HCl	VOC
40 mL	2	Amber Glass Teflon™ Lined Cap	25 mg Ascorbic Acid	None	VOC Blank Prepared with reagent water at the laboratory prior to shipment
125 mL	1	Glass Teflon™ Lined Cap	None	None	Alkalinity, Conductivity, pH, TDS
125 mL	1	Glass Teflon™ Lined Cap	None	4 Drops HNO_3	Gross Alpha / Beta
125 mL	1	Glass Teflon™ Lined Cap	13 mg Sodium Thiosulfate	4 Drops HCl	PAH
125 mL	1	Glass Teflon™ Lined Cap	7 mg Sodium Sulfite	4 Drops HCl	Pesticides

— TABLE XII NOTES —

All acronyms defined in Appendix B
PE: Polyethylene or Nalgene™ Plastic
SEE TABLE XIII: Acid Preservation for specifics on acid concentrations and volumes required.
NOTE: The Deployment 40 mL Drinking Water Kit was developed to screen drinking water for a limited list of contaminants. The Deployment 40 mL Drinking Water Kit ***cannot*** be used for drinking water compliance testing. The reduced volume (40 mL) of the Kit does not allow for full quality control procedures to be performed for all methods and is not suitable for dealing with matrix interference problems and repeat analyses are severely limited due to the 40 mL volume of the Kit. ***The Deployment 40 mL Drinking Water Kit is not suitable for raw water, ground water, surface water, or any bulk liquid sampling and testing.***

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

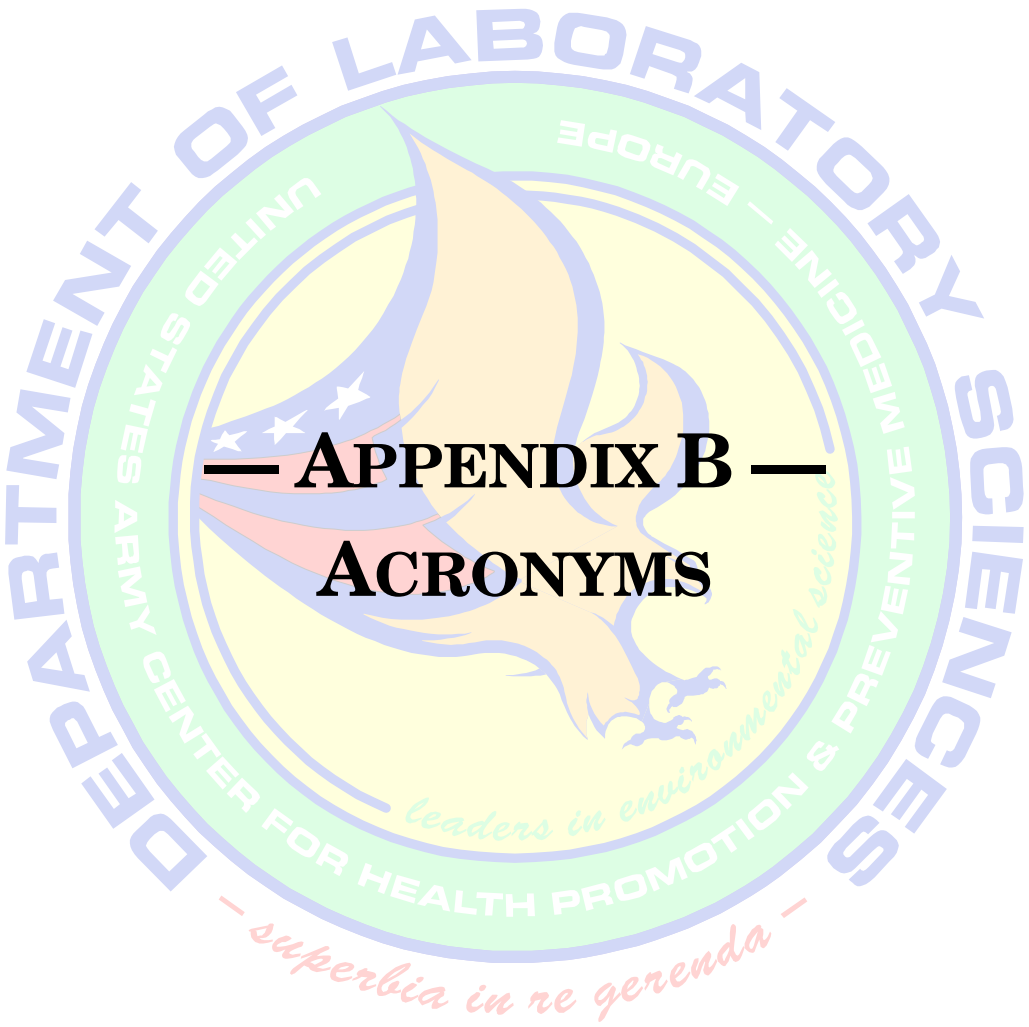
XIII – Acid Preservation				
Acid		Dilution Factor	Acid Volume	De-ionized Water
HCl	Hydrochloric Acid	2X	1 part	1 part
HNO_3	Nitric Acid	4X	1 part	3 parts
H_2SO_4	Sulfuric Acid	2X	1 part	1 part

Recommended Acid Volume For Each Container Size					
Container Size =	**40 mL**	**125 mL**	**250 mL**	**500 mL**	**1000 mL**
2X or 4X Acid Volume =	4 Drops	0.5 mL	1.0 mL	2.5 mL	5.0 mL

— TABLE XIII NOTES —

All acronyms defined in Appendix B
NOTE: *The quality of your data can be compromised by the quality of the containers, preservatives, sampling technique, temperature control, packaging, and shipping employed. Please ensure you use* ***only*** *environmentally certified containers, collection media of a single lot that has* ***not*** *expired, appropriate analytical quality preservatives (e.g., ACS, trace metal analyzed, etc.), and you use approved sample collection procedures.*

DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.



— APPENDIX B —
ACRONYMS

3M™	Minnesota Mining and Manufacturing
°C	Degrees Celsius (Centigrade)
#X	Dilution Factor (e.g., 4X = 1 part neat material plus 3 parts diluent)
AMC	Air Mobility Command
AOX	Adsorbable Organic Halogens
ASTM	American Society for Testing Materials
BIA	Berufsgenossenschaftliches Institut für Arbeitsschutz (German Institute for Occupational Safety and Health)
BTEX	Benzene, Toluene, Ethylbenzene & Xylene
BL	Bulk Liquid
BOD	Biological Oxygen Demand
BS	Bulk Solid
CHC	Chlorinated Hydrocarbons
USACHPPMEUR	United States Army Center for Health Promotion and Preventive Medicine - Europe
COD	Chemical Oxygen Demand
CSD	Customer Support Division
CL	Contract Laboratory
CT	Charcoal Tube
DAP	Deutsches Akkreditierungssystem Prüfwesen, GmbH (German Accreditation System for Testing Ltd.)
DFG	Deutsche Forschungsgemeinschaft (German Research Society)
DIN	Deutsches Institut für Normung (German Industry Norm)
DLS	Department of Laboratory Sciences
DoD	Department of Defense
DSN	Defense Switched Network (telephone)
DW	Drinking Water
EDB/DBCP	Ethylene Dibromide / 1,2-Dibromo-3-chloropropane
EN	Europäische Normung (European Norm)
EPA	Environmental Protection Agency
EU	European Union
FIA	Flow Injection Analysis
FL	Filter

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FLAAS	Flame Atomic Absorption Spectroscopy
FTIR	Fourier Transform Infrared Spectrophotometer
g	Gram(s)
GC-ECD	Gas Chromatography – Electron Capture Detector
GC-FID	Gas Chromatography – Flame Ionization Detector
GC-MS	Gas Chromatography – Mass Spectrometry
GC-MSD	Gas Chromatography – Mass Selective Detector
GC-MSD, P&T	Gas Chromatography – Mass Selective Detector – Purge & Trap
GFAAS	Graphite Furnace Atomic Absorption Spectroscopy
GPS	Gas Proportional Scintillation Counter
GW	Groundwater
H_2SO_4	Sulfuric Acid
HAZCAT™	Chemical Testing Kit offered by Haztech® Systems, Inc.
HCl	Hydrochloric Acid
HNO_3	Nitric Acid
HPLC	High Performance Liquid Chromatography
HPLC PCR	High Performance Liquid Chromatography Post Column Reactor
IC	Ion Chromatograph
ID	Identification
ICP-AES	Inductively Coupled Plasma – Atomic Emission Spectrophotometer
ICP-MS	Inductively Coupled Plasma – Mass Spectrometer
ICTD	Inorganic Chemistry & Toxicology Division
IH	Industrial Hygiene
ISE	Ion Selective Electrode
ISO	International Organization for Standardization
ISE	Ion Selective Electrode
L	Liter
LIMS	Laboratory Information Management System
LM	Lösungsmittel (solvents) i.e., LM Method #2 / Method #4, Analytical Methods for Air Analysis of Solvent Mixtures
LOQ	Limit of Quantitation
MCE	Mixed Cellulose Ester

MCL	Maximum Contaminant Level
MDL	Method Detection Limit (the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero)
min	Minute
MIPR	Military Interdepartmental Purchase Request
mL	Milliliter
MRT	Management Review Team
ND	Not Determined
MPS	Military Postal Service
MSDS	Material Safety Data Sheet
NaOH	Sodium Hydroxide
NIOSH	National Institute for Occupational Safety and Health
NVLAP	National Voluntary Laboratory Accreditation Program
O	Oil
OCTD	Organic Chemistry & Toxicology Division
OSHA	Occupational Safety and Health Administration
ORBO™	Type of Collection Media Provided by Supelco®
OVM	Organic Vapor Monitor
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCM	Phase Contrast Microscope
PE	Polyethylene or Nalgene Plastic
PLM	Polarized Light Microscope
PTFE	Polymer of Tetrafluorethylene
PVC	Polyvinyl Chloride
QAD	Quality Assurance Division
RLS	Request for Laboratory Services
RT	Room Temperature
SAE	Sampling and Analytical Error (OSHA Methods)
SEM	Scanning Electron Microscope
S	Soil, Sludge, or Bulk Solid
SI	System International

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SKC™	SKC Inc., manufacturer of air sampling supplies
SL	Soil
SM	Standard Methods
SOP	Standard Operating Procedure
SRN	Service Request Number
TCN	Transportation Control Number
TDAAS	Thermal Decomposition Atomic Absorption Spectrophotometer
TDS	Total Dissolved Solids
TEM	Transmission Electron Microscopy
TIC	Toxic Industrial Chemicals
TIM	Toxic Industrial Materials
TR	Technische Richtlinie (Technical Guidance)
TSS	Total Suspended Solids
TOC	Total Organic Carbon
T.O.N.	Threshold Odor Number
TPH	Total Petroleum Hydrocarbons
TTHM	Total Trihalomethanes
US	United States
VDI	Verein Deutscher Ingenieure (German Society of Engineers)
VOC	Volatile Organic Compound
X#	Multiplication Factor (e.g., X2 = Unit times 2)
WP	Wipe
W	Water (drinking water, groundwater, wastewater or bulk liquid)
WW	Wastewater

— Uncontrolled Copy —

— APPENDIX C —
AIR MOBILITY COMMAND (AMC) FORMS

AIR MOBILITY COMMAND (AMC)

AMC shipments can be made from military installations in proximity to a United States Air Base. Sample collection kits are often sent via AMC.

C-1 Transportation Movement Control Document (TCMD)

The DD Form 1384 (TCMD) is used to request a shipment via AMC. Contact your local Air Mobility Command Flight for procedures. Use the following table to complete the TCMD (a blank form follows).

Table C1 — Transportation Control Document

BLOCK	BLOCK ID	ENTER THIS INFORMATION
1	Document ID	TX1
2	Trir Cont	00000
3	Consignor	Your DODAAC, Your Unit, Your APO
4	Comm: Spec. Handling	MZ
5	Air Dim	A
6	POE	Enter three letter destination code from Table C2
7	POD	RMS (Ramstein)
8	Mode	F
9	Pack	BX
10	Transportation Control Number (TCN)	DODDAC, Julian date, shipment number e.g., WK4UPX82340001XXX
11	Consignee	WK4UPX, USACHPPMEUR, CMR 402, APO AE 09180
12	Priority	1
13	RDD	If shipment requires re-icing – 999 If no special handling is required – leave blank
15	Date Shipped	Julian date of shipment
17	Tr. Account	A2DR
18	Carrier	AMC

Table C1 — Transportation Control Document		
BLOCK	**BLOCK ID**	**ENTER THIS INFORMATION**
21	Remarks	Contents of parcel
22	Pieces	Total number of pieces in shipment
23	Weight	Combined weight in shipment
24	Cube	Combined cubic measurement of shipment
43	Remarks	U.S. Army Center for Health Promotion and Preventive Medicine – Europe Department of Laboratory Sciences (DLS) ATTN: MCHB-AE-LS (CSD) CMR 402 APO AE 09180 (DSN 314-486-7052)

Table C2 — Point of Destination Codes	
POD CODE	**LOCATION**
ADA	Incirlik and Izmir, Turkey
AVB	Aviano, Italy
BDF	San Vito, Italy
CHQ	Souda Bay, Greece
FRF	Rhein Main, Germany
GPA	Araxos, Greece
NAP	Naples, Italy
RMS	Ramstein, Germany
SIZ	Sigonella, Italy (also used for Vicenza, Italy)

C-2 Military Shipment Label

Each piece of the shipment must have a Military Shipment Label (Order DD Form 1387 from government publications and contact your local TMO for help, blank form follows) attached to the side of the parcel. Use the following table to complete the shipment label.

Table C3 — Military Shipment Label		
BLOCK	**BLOCK ID**	**ENTER THIS INFORMATION**
1	TCN	The TCN used on the TCMD
2	Postage Data	Leave Blank
3	Consignor	Your DODAAC, Your Unit, Your APO
4	Type Service	Leave Blank
5	POE	Three letter code from Table C2
6	Transportation Priority	1
7	POD	RMS
8	Project	Leave Blank
9	Ultimate Consignee	U.S. Army Center for Health Promotion and Preventive Medicine – Europe Department of Laboratory Sciences (DLS) ATTN: MCHB-AE-LS (CSD) CMR 402 APO AE 09180 (DSN 413-486-7052)
10	Weight	Weight of this piece
11	RDD	If shipment requires re-icing – 999 If no special handling is required – leave blank
12	Cube	Cubic measurement of this piece
13	Charges	Leave Blank
14	Date Shipped	Julian date of the shipment
15	FMS Case Number	Leave Blank
16	Piece Number	Number of this piece
17	Total Pieces	Total number of pieces in this shipment

C-3 Declaring Dangerous Goods

Class 8 Dangerous Goods in Excepted Quantities must be declared. All liquid preservatives used are Class 8 Dangerous Goods. The requirements for Excepted Quantities are defined as: No more than 30 mL of preservative for primary container (sample container) and no more than 1 L total preservative for secondary container (cooler). DLS meets these requirements.

The following statement must be added to the TCMD and the Shipment Label:

Hazardous materials in excepted and limited quantities in accordance with Air Force Interservice Manual 24-204, TM 38-250, NAVSUP PUB 505, MCO P4030.19H, DLAI 4145.3, 11 December 2001, Air Force Reserve Command, Supplement 1, 19 June 2002, Attachment 19, Transportation, ***Preparing Hazardous Materials for Military Air Shipments***

Available at: **http://www.e-publishing.af.mil** - search for**: afman24_204** and then download the most current supplement. At the time of publication of the DLS Customer Guide Ver. 1 – Rev. 6: afman24_204(i)_afrcsup1_i.pdf

— APPENDIX D —
QUALITY ASSURANCE

— Uncontrolled Copy —

DLS QUALITY ASSURANCE

"Pride in Performance"

Our motto echoes our goal which is to produce quality data meeting required specifications at all times by discipline and attention to detail. Quality improvement is a continuous process that is constantly being implemented by DLS to provide our clients with a quality product and the best possible level of customer service.

*DLS' ultimate goal is to **delight** all our customers with our quality and customer service*!

LABORATORY ACCREDITATION

DLS maintains several nationally and internationally recognized independent 3rd party accreditations, registrations, and certifications to ensure the quality of your data:

— Deutscher Akkreditierungs Rat (DAR) —

— Deutsches Akkreditierungssystem Prüfwesen GmbH (DAP) —

DIN EN ISO / IEC 17025:2000 Accredited Testing Laboratory

— National Quality Assurance (NQA) —

ISO 9001:2000 Registered Quality Management System (QMS)

— National Quality Assurance (NQA) —

ISO 14001:1996 Registered Environmental Management System (EMS)

— American Industrial Hygiene Association (AIHA) —

ISO / IEC 17025:1999 Environmental Lead Laboratory Accreditation Program (ELLAP)

Laboratory Proficiency Studies

DLS is a regular participant in the following Proficiency Testing Programs:

American Industrial Hygiene Association (AIHA)
(Administered by Research Triangle Institute)

Bulk Asbestos & Navy Bulk Asbestos Performance Evaluation (PE)

American Industrial Hygiene Association (AIHA)

Environmental Lead Proficiency Analytical Testing (ELPAT)

American Industrial Hygiene Association (AIHA)

Metals & Fibers on Air Filters Performance Evaluation (PE)

Analytische Qualitätssicherung (AQS) Baden Württemberg

Drinking Water, Ground Water, & Wastewater Performance Evaluations (PE)

Bundesanstalt für Materialforschung und Prüfung (BAM)

Wastewater Performance Evaluations (PE)

Environmental Resource Associates (ERA, NVLAP Accredited)

Environmental Radioactivity Performance Evaluation (PE)

Environmental Resource Associates (ERA, NVLAP Accredited)

Soil Performance Evaluation (PE)

Environmental Resource Associates (ERA, NVLAP Accredited)

Water Pollution Performance Evaluation (PE)

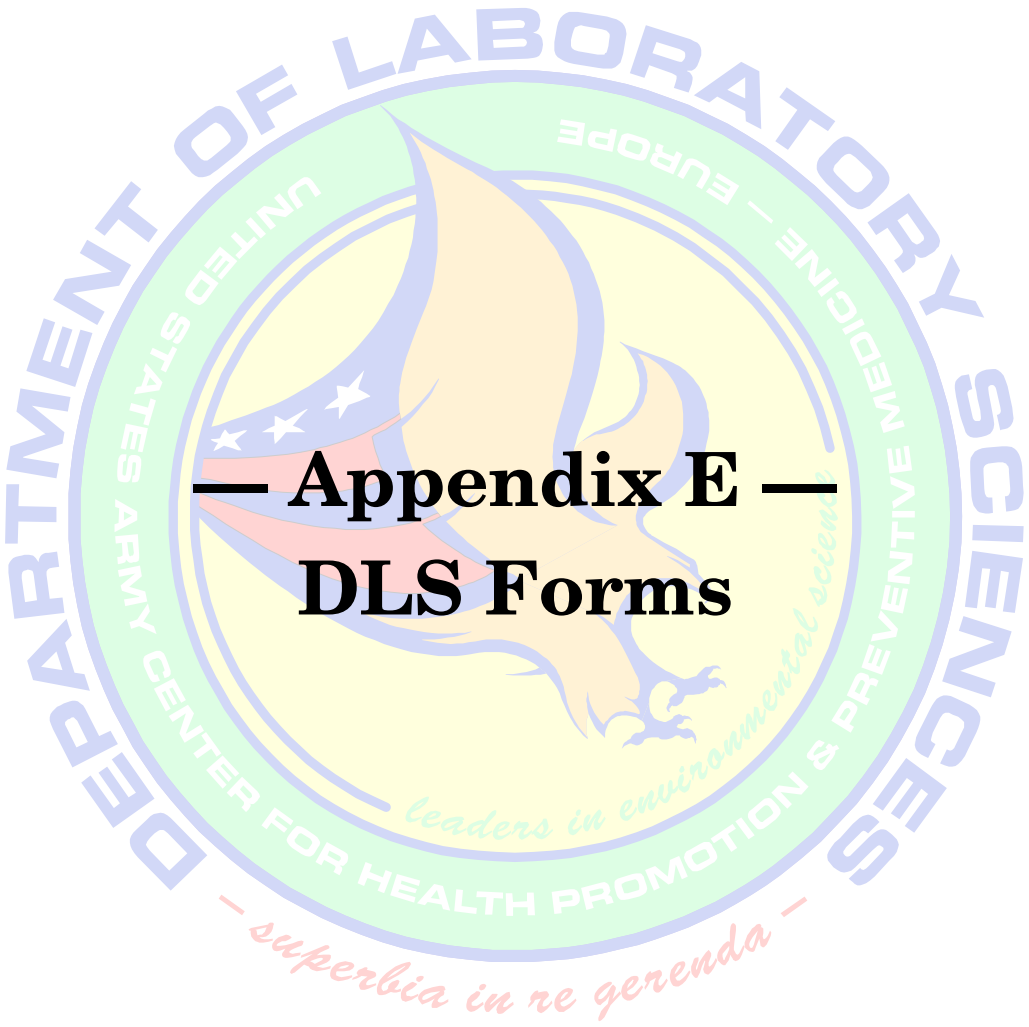
Environmental Resource Associates (ERA, NVLAP Accredited)

Water Supply Performance Evaluation (PE)

Laboratory Proficiency Studies Provided by DLS

Fluoride Proficiency Program (FPP)

The USACHPPMEUR Fluoride Proficiency Program (FPP) is a voluntary, free-of-charge program available to DoD installations in Europe to provide an external validation of drinking water fluoride monitoring results. Participation in the FPP can ensure that fluoride monitoring is accurate and U.S. personnel receive properly fluoridated drinking water. DLS sends FPP kits quarterly to sites performing fluoride monitoring for their installation. The site analyzes the sample and sends their results back to DLS. DLS compares the results to the known value and issues a report. The site can use the report to verify the accuracy of personnel and monitoring equipment, and/or adjust their fluoride methodologies. For more information contact the DLS QAD at DSN 486-6409 or commercial, +49-6371-866409.



— Appendix E —
DLS Forms

CSD Form 1
Version 3.6
Revised: Sept. 2004

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request for Laboratory Services

Customer Address:				**DLS SRN:**
Project Officer:		**Request Date (DDMMMYYYY):**		
TEL:	**FAX:**	**Email:**		
Division:	**Program:**	**Installation Site:**		**ARLOC / WIC:**
Source of Funds:		**MIPR No.:**		
Project Number:		**Sampling Date:**	**Delivery Date:**	
DLS Sampling Kit Required: ❑ **No** ❑ **Yes** **Date Kit Required:**			**Kit Shipped By:**	
Analysis Priority Requested ❑ **Routine** ❑ **Immediate** ❑ **Emergent**		**Justification (see Note 2):**		

Note 1: Sample Priorities are associated with Turnaround Time (TAT) ***goals*** and not guarantees. TAT is defined as the number of calendar days from sample receipt at the laboratory to the transmittal of data by Electronic Data Deliverable (EDD) courier, FAX, or certified mail. The DLS "in-house" TAT ***goals*** are: Routine: 14 days, Immediate: 7 days, and Emergent: 48-96 Hrs. (test dependent). Qualitative Identification of contaminants from samples of unknown origin may require 30 to 90 days or more to complete.

Note 2: Immediate / Emergent analysis priority ***requires*** a written statement documenting the ***risk*** that justifies the elevated priority.

Note 3: This Request for Laboratory Service will be cancelled 60 calendar days after the Projected Delivery Date unless the Project Officer provides a written confirmation of an updated Delivery Date.

Note 4: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

Note 5: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements.

❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*

Projected Samples

Analysis	Matrix	Quantity	Remarks	DLS Use CL

❑ ***Request lead (Pb) samples be analyzed IAW ELLAP criteria – Note: Pb "Wipes" must meet ASTM E 1792 specifications.***

Comments / Qualifications:

— For Laboratory Use Only —

Inorganic Analyses				**Organic Analyses**			
❑ Accept	❑ Reject	Date:	Initials:	❑ Accept	❑ Reject	Date:	Initials:
Comments:				**Comments:**			

Please contact us. DLS professionals would be delighted to help answer any of your questions and concerns!

	DSN	**Commercial**	Use our preferred email address to ensure a quick response.	
TEL	314-486-8181 / 7052	+49 (06371) 86-8371 / 6052	**Email**	usachppmeur.dlshotline@amedd.army.mil
FAX	314-486-7054 / 8788	+49 (06371) 86-7054 / 8788	**Web Site**	www.chppmeur.healthcare.hqusareur.army.mil

CSD Form 2
Version 1.3
Revised: Sept. 2004

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request for Laboratory Analysis: Industrial Hygiene Bulk Sample

Customer Address:			**DLS SRN:**
Project Officer:		**Project No.:**	
TEL:	**FAX:**	**Email:**	
Installation Site:		**ARLOC / WIC:**	
Fund Source:		**MIPR No.:**	
Collection Date:		**Sample ID:**	
Collection Time:	**Analysis Priority Requested**	❑ **Routine** ❑ **Immediate** ❑ **Emergent**	
Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.			
Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements. ❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*			

Description of Operation:			
Persons Exposed:	**Hours / Day:**	**Associated Air Samples Collected**	
		❑ **Yes**	❑ **No**
Associated Complaints:			
Label Information			
Trade Name:	**NSN:**	**Manufacturer:**	
Address:		**MSDS Attached**	
		❑ **Yes**	❑ **No**

Analysis Requested:

DLS Sample ID	Sample ID	Sample Area	Constituents	Remarks

❑ ***Request lead (Pb) samples be analyzed IAW ELLAP criteria*** *– Note: Pb "Wipes" must meet ASTM E 1792 specifications.*

Comments to the Laboratory:

— For Laboratory Use Only —		
Date Received:	**Holding Area:**	**Holding Area:**
Laboratory Comments:		

CSD Form 3
Version 1.3
Revised: Sept. 2004

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request for Laboratory Analysis: Industrial Hygiene Air Sample

Customer Address:			**DLS SRN:**
Project Officer:		**Project No.:**	
TEL:	**FAX:**	**Email:**	
Installation Site:		**ARLOC / WIC:**	
Fund Source:		**MIPR No.:**	
Collection Date:		**Sample ID:**	
Collection Time:	**Analysis Priority Requested**	❑ **Routine**	❑ **Immediate** ❑ **Emergent**
Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.			
Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements. ❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*			

Description of Operation:						
Persons Exposed:	**Hours / Day:**	**Method of Collection:**				
Associated Complaints:						
Analysis Requested:						
Criteria	**Sampling Data**					
Sample No.						
Pump No.						
Time On						
Time Off						
Total Minutes						
Flow Rate (LPM)						
Volume (L)						
GA/BZ						
Employee ID						
DLS Sample ID						
❑ ***Request lead (Pb) samples be analyzed IAW ELLAP criteria – Note: Pb "Wipes" must meet ASTM E 1792 specifications.***						
Comments to the Laboratory:						

— For Laboratory Use Only —		
Date Received:	**Holding Area:**	**Holding Area:**
Laboratory Comments:		

CSD Form 4
Version 2.1
Revised: Dec. 2003

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request of Laboratory Analysis: Bulk Liquid / Ground Water / Wastewater Profile Sheet

Customer Address:			**DLS SRN:**
Project Officer:		**Project No.:**	
TEL:	**FAX:**	**Email:**	
Installation Site:		**ARLOC / WIC:**	
Fund Source:		**MIPR No.:**	
Collection Date:		**Sample ID:**	
Collection Time:	**Analysis Priority Requested** ❑ **Routine** ❑ **Immediate** ❑ **Emergent**		
Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.			
Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements. ❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*			

METALS

- ❑ **Aluminum (Al)**
- ❑ **Antimony (Sb)**
- ❑ **Arsenic (As)**
- ❑ **Barium (Ba)**
- ❑ **Beryllium (Be)**
- ❑ **Cadmium (Cd)**
- ❑ **Calcium (Ca)**
- ❑ **Chromium (Cr)**
- ❑ **Cobalt (Co)**
- ❑ **Copper (Cu)**
- ❑ **Iron (Fe)**
- ❑ **Lead (Pb)**
- ❑ **Magnesium (Mg)**
- ❑ **Manganese (Mn)**
- ❑ **Mercury (Hg)**
- ❑ **Molybdenum (Mo)**
- ❑ **Potassium (K)**
- ❑ **Nickel (Ni)**
- ❑ **Silver (Ag)**
- ❑ **Selenium (Se)**
- ❑ **Sodium (Na)**
- ❑ **Zinc (Zn)**
- ❑ **Hardness (calculation)**
- ❑ **Langlier Index**
  Record: Temp. _____ & pH _____

Other Analyses

_____

NON-METALS

- ❑ **Ammonia**
- ❑ **Total Nitrate / Nitrate**
- ❑ **Cyanide**
- ❑ **Alkalinity**
- ❑ **Conductivity**
- ❑ **pH**
- ❑ **TDS**
- ❑ **Bromide**
- ❑ **Chloride**
- ❑ **Fluoride**
- ❑ **Sulfate**

Please Note: The following analytes have a 48 hour holding time and ***must*** be analyzed by the laboratory within 48 hours of their collection.

- ❑ **Color**
- ❑ **Nitrate**
- ❑ **Nitrite**
- ❑ **Odor**
- ❑ **ortho-Phosphate**
- ❑ **Total Nitrate / Nitrite**
- ❑ **Turbidity**
- ❑ **Gross Alpha & Beta Activity**

ORGANICS

- ❑ **BTEX**
- ❑ **Carbamates**
- ❑ **CHC**
- ❑ **EDB / DBCP**
- ❑ **Herbicides**
- ❑ **PAH**
- ❑ **PCB**
- ❑ **Pesticides**
- ❑ **TPH (MDL 0.05 mg/L)**
- ❑ **TPH (MDL 0.02 mg/L)**

  Please Note: To achieve this MDL you ***must*** submit 2 liters of water.
- ❑ **VOC**

Contract Laboratory Analyses

- ❑ **AOX**
- ❑ **BOD**
- ❑ **Boron (B)**
- ❑ **COD**
- ❑ **Fish Toxicity**
- ❑ **Hydrogen Sulfide**
- ❑ **Kjedahl Nitrogen**
- ❑ **Oxidizability**
- ❑ **Surfactants**
- ❑ **Total Phenols**
- ❑ **Total Phosphorus (P)**

— For Laboratory Use Only —		
Date Received:	**Holding Area:**	**Holding Area:**
Laboratory Comments:		

CSD Form 5
Version 2.3
Revised: Dec. 2003

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request of Laboratory Analysis: Drinking Water Profile Sheet

Customer Address:			**DLS SRN:**
Project Officer:		**Project No.:**	
TEL:	**FAX:**	**Email:**	
Installation Site:		**ARLOC / WIC:**	
Fund Source:		**MIPR No.:**	
Collection Date:		**Sample ID:**	
Collection Time:	**Analysis Priority Requested** ❑ **Routine** ❑ **Immediate** ❑ **Emergent**		

Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements.

❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*

METALS

- ❑ **Aluminum (Al)**
- ❑ **Antimony (Sb)**
- ❑ **Arsenic (As)**
- ❑ **Barium (Ba)**
- ❑ **Boron (B)**
- ❑ **Beryllium (Be)**
- ❑ **Cadmium (Cd)**
- ❑ **Calcium (Ca)**
- ❑ **Chromium (Cr)**
- ❑ **Cobalt (Co)**
- ❑ **Copper (Cu)**
- ❑ **Iron (Fe)**
- ❑ **Lead (Pb)**
- ❑ **Magnesium (Mg)**
- ❑ **Manganese (Mn)**
- ❑ **Mercury (Hg)**
- ❑ **Molybdenum (Mo)**
- ❑ **Nickel (Ni)**
- ❑ **Potassium (K)**
- ❑ **Selenium (Se)**
- ❑ **Silver (Ag)**
- ❑ **Sodium (Na)**
- ❑ **Thallium (Tl)**
- ❑ **Total Phosphorus (P)**
- ❑ **Zinc (Zn)**
- ❑ **Hardness (calculation)**
- ❑ **Langlier Index**
  Record: Temp. _____ & pH _____

NON-METALS

- ❑ **Ammonia**
- ❑ **Total Nitrate / Nitrate**

- ❑ **Cyanide**

- ❑ **Alkalinity**
- ❑ **Conductivity**
- ❑ **pH**
- ❑ **TDS**

- ❑ **Bromide**
- ❑ **Chloride**
- ❑ **Fluoride**
- ❑ **Sulfate**

Please Note: The following analytes have a 48 hour holding time and ***must*** be analyzed by the laboratory within 48 hours of their collection.

- ❑ **Color**
- ❑ **Nitrate**
- ❑ **Nitrite**
- ❑ **Odor**
- ❑ **ortho-Phosphate**
- ❑ **Total Nitrate / Nitrite**
- ❑ **Turbidity**

- ❑ **Gross Alpha & Beta Activity**

ORGANICS

- ❑ **Carbamates**
- ❑ **EDB / DBCP**
- ❑ **Herbicides**
- ❑ **PAH**
- ❑ **PCB**
- ❑ **Pesticides**
- ❑ **TPH (MDL 0.05 mg/L)**
- ❑ **TPH (MDL 0.02 mg/L)**

Please Note: To achieve this MDL you ***must*** submit 2 liters of water.

- ❑ **TTHM**
- ❑ **TTHM Potential**
- ❑ **VOC**

Contract Laboratory Analyses

- ❑ **Asbestos**
- ❑ **Adipate & Phthalate**
- ❑ **Dalapon**
- ❑ **Diquat & Paraquat**
- ❑ **Dioxin (TCDD)**
- ❑ **Endothall**
- ❑ **Glyphosate**
- ❑ **Kjedahl Nitrogen**
- ❑ **Oxidizability**
- ❑ **Surfactants**
- ❑ **Radium 226 & 228 Activity**

Other Analyses

_____

— For Laboratory Use Only —		
Date Received:	**Holding Area:**	**Holding Area:**
Laboratory Comments:		

CSD Form 6
Version 1.3
Revised: Sept. 2004

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request for Laboratory Analysis: Customer Defined

Customer Address:			**DLS SRN:**
Project Officer:		**Project No.:**	
TEL:	**FAX:**	**Email:**	
Installation Site:		**ARLOC / WIC:**	
Fund Source:		**MIPR No.:**	
Collection Date:		**Sample ID:**	
Collection Time:	**Analysis Priority Requested** ❑ **Routine** ❑ **Immediate** ❑ **Emergent**		
Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.			
Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements. ❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*			

DLS ID No.	**Customer Sample No.**	**Matrix**	**Analyses**									
❑ ***Request lead (Pb) samples be analyzed IAW ELLAP criteria –*** *Note: Pb "Wipes" must meet ASTM E 1792 specifications.*												

Preservative Added:			**Remarks (characteristics, location, etc.):**
Date:	**Time:**	**By:**	
pH:		**By:**	

— For Laboratory Use Only —		
Date Received:	**Holding Area:**	**Holding Area:**
Laboratory Comments:		

CSD Form 7
Version 1.2
Revised: Dec. 2003

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Chain of Custody

Customer Address:				**DLS SRN:**
Project Officer:		**Project No.:**		
TEL:	**FAX:**	**Email:**		
Installation Site:		**ARLOC / WIC:**		
Fund Source:		**MIPR No.:**		
Collection Date:		***— Analysis Priority Requested —***		
Collection Time:		**❑ Routine**	**❑ Immediate**	**❑ Emergent**
Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.				
Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements. ❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*				

Sample ID	Description	Analysis

Shipment Information			Seal Intact	
Packed By:	**Date:**	**Time:**	**❑ Yes**	**❑ No**
Shipped By:	**Date:**	**Time:**	**❑ Yes**	**❑ No**
Shipper:	**Tracking No.:**		**❑ Yes**	**❑ No**
Received By:	**Date:**	**Time:**	**❑ Yes**	**❑ No**
Shipment Receiving Comments:				

Sample Receiving Information						
Sample ID	**Received By**	**Date**	**Time**	**DLS ID**	**Seal Intact**	
					❑ Yes	**❑ No**
					❑ Yes	**❑ No**
					❑ Yes	**❑ No**
					❑ Yes	**❑ No**
					❑ Yes	**❑ No**
					❑ Yes	**❑ No**

Transfer of Custody						
DLS ID	**Relinquished By**	**Date**	**Time**	**Received By**	**Date**	**Time**

Disposal Information			
Sample IDs	**Disposed By**	**Date**	**Time**

CSD Form 8
Version 1.1
Revised: Dec. 2003

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request for Laboratory Analysis: Bioassay

Customer Address:			**DLS SRN:**
Project Officer:		**Project No.:**	
TEL:	**FAX:**	**Email:**	
Installation Site:		**ARLOC / WIC:**	
Fund Source:		**MIPR No.:**	
Collection Date:		**Sample ID:**	
Collection Time:	**Analysis Priority Requested** ❑ **Routine** ❑ **Immediate** ❑ **Emergent**		
Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.			
Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements. ❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*			

Name	SSN	DOB	Specimen	Date of Collection	Start Time	End Time

Requesting Medical Provider:
_____
_____

Address:
_____
_____

Phone No: _____ **Fax No:** _____ **Email:** _____

— For Laboratory Use Only —		
Date Received:	**Holding Area:**	**Holding Area:**
Laboratory Comments:		

CSD Form 9
Version 1.2
Revised: Sept. 2004

DEPARTMENT OF THE ARMY
USACHPPMEUR
DEPARTMENT OF LABORATORY SCIENCES

MCHB-AE-LS

Request of Laboratory Analysis: Deployment 40 mL Drinking Water Kit (Screen)

Customer Address:			**DLS SRN:**
Project Officer:		**Project No.:**	
TEL:	**FAX:**	**Email:**	
Installation Site:		**ARLOC / WIC:**	
Fund Source:		**MIPR No.:**	
Collection Date:		**Sample ID:**	
Collection Time:	**Analysis Priority Requested** ❑ **Routine** ❑ **Immediate** ❑ **Emergent**		

Note 1: DLS assumes neither responsibility nor liability for the sampling protocols employed by the customer.

Note 2: Unless noted below, I (the customer) hereby authorize DLS when necessary to sub-contract requested analyses to an accredited Contract Laboratory to meet my requirements.

❑ ***NO*** *– I do* ***NOT*** *authorize DLS to sub-contract analyses. Please contact me before sending my samples to a contract lab.*

METALS & HARDNESS

2 – 40 mL Vials

- ❑ Aluminum (Al)
- ❑ Antimony (Sb)
- ❑ Arsenic (As)
- ❑ Barium (Ba)
- ❑ Beryllium (Be)
- ❑ Cadmium (Cd)
- ❑ Calcium (Ca)
- ❑ Chromium (Cr)
- ❑ Copper (Cu)
- ❑ Iron (Fe)
- ❑ Lead (Pb)
- ❑ Magnesium (Mg)
- ❑ Manganese (Mn)
- ❑ Mercury (Hg)
- ❑ Nickel (Ni)
- ❑ Silver (Ag)
- ❑ Selenium (Se)
- ❑ Thallium (Tl)
- ❑ Zinc (Zn)
- ❑ Hardness (Calculated - Ca & Mg)

Other Metals

- ❑ Sodium (Na)

NON-METALS

1 – 40 mL Vial
- ❑ Ammonia

1 – 40 mL Vial
- ❑ Cyanide

1 – 125 mL Vial
- ❑ Alkalinity
- ❑ Conductivity
- ❑ pH
- ❑ TDS

1 – 40 mL Vial
- ❑ Total Nitrate/Nitrite

1 – 40 mL Vial
- ❑ Color, Apparent
- ❑ Turbidity

1 – 40 mL Vial
- ❑ Chloride
- ❑ Fluoride
- ❑ Sulfate

NON-METALS

1 – 125 mL Vial
- ❑ Gross Alpha & Beta Activity

ORGANICS

3 – 40 mL Vials
- ❑ VOC (Includes TTHM)

2 – 40 mL Vials
- ❑ VOC BLANK

2 – 40 mL Vials
- ❑ EDB / DBCP

1 – 40 mL Vial
- ❑ EDB / DBCP BLANK

1 – 125 mL Vial
- ❑ PAH

1 – 125 mL Vial
- ❑ Pesticides (includes Lindane and Heptachlor)

2 – 40 mL Vials
- ❑ Herbicides

1 – 40 mL Vial
- ❑ Carbamates

Comments for the Laboratory:

— For Laboratory Use Only —		
Date Received:	**Holding Area:**	**Holding Area:**
Laboratory Comments:		

www.chppmeur.healthcare.hqusareur.army.mil

usachppmeur.dlshotline@amedd.army.mil